

Letter 58

58

Public Health Effects Related to Air Pollution

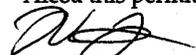
I would like to comment on what I see as the major deficiency in the US Corps of Engineers' consideration of the public health effects of the proposed Three Oaks Mine project as related to air pollution.

This draft EIS limits its consideration to fugitive dust produced during mining and to related vehicle and equipment emissions. While those are important factors, the larger issue is the air pollution produced by the continued use of lignite as the fuel source at four power generating stations not using best available control technology.

58-1

Though the DEIS states that the existing Rockdale power generating facility and smelter are considered interrelated projects for the consideration of potential cumulative impacts with the proposed mine, it insists on keeping them as separate sources in its application of legislated air pollution regulations on all pollutants except particulate matter, 10 microns and above. The USACE limits its concept of cumulative impact overlap to one of physical proximity. It insists on considering only PM₁₀ standards, because those are the predominant air pollutants that would be produced by the act of strip mining alone, instead of considering that the other criteria air pollutants and unregulated air toxics produced by lignite combustion would not be produced in the absence of its extraction from the ground and use as a fuel source. The mining of lignite in the proposed Three Oaks Mine would permit Alcoa to continue its legacy of air pollution and harm to human health.

The USACE has the power and the responsibility to improve the respiratory and cardiovascular health of the citizens of this region by ~~refusing to grant~~ ^{denying} Alcoa this permit and forcing them to use a cleaner source of fuel.



Lloyd Sargent
POB 805
ELGIN, TX
78621

(512) 281-3740

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Please see the responses to general comments AQ-1 and AQ-2 in Section 4.5.6 of the Final EIS relative to cumulative air quality impacts and proposed reductions in power plant emissions. Relative to the use of other fuels, please refer to Section 2.4.1 of the Draft EIS and to the response to general comment Alternatives-1 in Section 4.5.2 of the Final EIS for a discussion of the USACE's consideration of other fuel sources as alternatives to lignite.

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Subject: Public Comment to Three Oaks Mine Draft EIS –Surface Water Controls
From: Judy S. Ellis
168 Potato Smith Road (aka: CR 126 Bastrop County)
Elgin, Texas 78621

Dear Ms. Jennifer Walker,

I would like to thank you for the extension of time to put together our public comments. The first copy of the study I received was bound incorrectly and difficult to read. I found the replacement you sent much easier to work with. Thank you for the additional copy.

59-1

My comments in this letter deal strictly with the surface water control portions of the draft EIS and the lack of any floodplain impact analysis for Alcoa discharges. My home and property border the mine on the southern end. My pasture fence is within feet of Chocolate Creek, a major discharge route for Alcoa's water. The only access I have to my home is by Potato Smith Road's low water crossing. This area floods frequently in the spring but is normally passable, receding quickly when the rain stops. unless Big Sandy Creek floods. Flooding at this location is aggravated by back flooding from Big Sandy Creek, making it impassable. Big Sandy Creek at Old McDade Road has a history of flooding with spring rains. The area at the southern end of the mine, where Chocolate Creek meets Big Sandy Creek, is classified by FEMA as a Zone A Flood Area. These creeks do not have the channel capacity to handle the volumes the report is estimating without frequent widespread flooding, placing the residents and property at risk.

I have taken pictures of this area to show what these creeks look like. There is a group of Comparison Photos, showing areas of Chocolate Creek and Big Sandy Creek before and after a 2.7 inch rain, and a group of Other Photos showing the floodplain areas of these creeks. I also have several reference items to support the observations I am presenting.

In reviewing different documents from different sources, I've observed several discrepancies in the study. I am not faulting the efforts you and your team have put in the study, but some of the information supplied to you may be questionable, incomplete, or outdated.

Observation 1:

The EIS assumes TNRCC's permit process will resolve many issues in the discharge of Alcoa waters.

59-2

3.2-6 Wastewater and storm water discharges from coal mining facilities are regulated by TNRCC under the TPDES program and other state regulations. TPDES permits are developed to ensure that such discharges to receiving waters are protective of human health and the environment. The permits establish discharge limits, monitoring and reporting requirements, and may stipulate measures to reduce or eliminate pollutant discharges to receiving waters.

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Please see the response to general comment SW-3 in Section 4.5.5 of the Final EIS relative to flooding potential below Three Oaks Mine discharge points. Additional hydrologic and hydraulic modeling have been conducted to investigate this issue, and changes have been made in the Final EIS. FEMA and county personnel have been contacted and provided with detailed project information. There are no additional flooding risks associated with storm events that occur on average every 2 years or more. There would be minimal impacts related to additional inundation along and adjacent to stream channels from Alcoa's groundwater discharges and from combined Alcoa and brickyard discharges. These impacts have been described in the Final EIS (see pages 3.2-71 through 3.2.71c and 3.2-94).

59-2

The potential for additional brickyard discharges was included in the cumulative investigation of potential flooding conditions along Big Sandy Creek and its tributaries. There are potential impacts related to additional inundation along and adjacent to stream channels from combined discharges; these impacts have been described on page 3.2-94 of the Final EIS. The RRC noted a deficiency in the original Alcoa mining permit application with respect to effects on low-water crossings. Alcoa, in its responses to RRC comments on the mine permit application, has committed to mitigating low-water crossings in Supplement 1 of the permit application (Alcoa 2001b [Volume 5]; Caudle 2002b).

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Elgin, Texas 78621

59-2 Alcoa's draft permit available for public review at TNRCC is for an *unrestricted rate and unrestricted flow*. There is no floodplain analysis in the permit work folder available for public review, suggesting impacts from the increased rates and flows on Chocolate and Big Sandy Creeks were not reviewed. There is no erosion analysis on Chocolate and Big Sandy Creeks, again suggesting this requirement of the permitting process was not done. Alcoa's draft permit, and the study, does not include discharges from TNRCC permits already issued for Big Sandy Creek. Prior to this year, I do not believe there were any industrial discharges in the segments north of Old McDade Road, at least creek levels over the last 10 years would indicate no discharges. These permitted discharges have raised the level of Big Sandy Creek at Old McDade Road by 3 or more feet, at a time of the year the creek is normally dry. The permits at issue:

Tiffany Brick Company	WQ0003720/TX0118630	Segment: 1428
Acme Brick Company	WQ0000444/TX0108103	Segment: 1428
Elgin Butler Brick Co	WQ0001414/TX0105309	Segment: 1428

The Executive Director of TCEQ (aka: TNRCC) has already gone on record stating 'the application of Alcoa, Inc, for TPDES Permit No. 04348 meets all applicable statutory and regulatory requirements and the draft permit should be issued'.

Reference Documents: (1) From TNRCC Website: Existing Discharge Permits (2) TNRCC Executive Director response on TPDES Docket 2002-04840-IWD Disclosure Request from Alcoa also: Photos

Observation 2:

59-3 The mitigation plan included in the study has some very important information regarding how TNRCC will judge rates and flows (if anyone elects to do so), and from where.

Appendix 3 - Mitigation Plan for Proposed Three Oaks Mine – Prepared for Alcoa by Horizon Environmental Services, Inc July 2002

8.1.2 (pg 30 in app E) Three outfalls have been designated in the TPDES permit application for Three Oaks Mine. These outfalls are located on stream channels at the approximate mine permit boundary, and they are considered to be "conceptual outfalls." Releases from any sedimentation ponds (managed waters) that are located within the watershed of a "conceptual outfall" will pass through the outfalls. Other waters will also pass through the outfalls, including depressurization releases, storm water runoff from undisturbed areas, and any naturally occurring baseflow in the stream. **Since the designated outfalls are "conceptual outfalls" that pass managed waters as well as large volumes of water from undisturbed areas, specification of flow or quality limits at the outfall is not appropriate.** Instead, **the TNRCC more appropriately places limitations upon the outfalls of the individual sedimentation ponds, wherever they may be located within the watershed.**

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59-3 Additional analyses have been conducted to investigate the potential flooding effects of proposed depressurization discharges and combined discharges resulting from depressurization, dewatering, and storm water sources; see pages 3.2-71 through 3.2-71c of the Final EIS. No flow limits were placed on the operation in the TPDES program due to the nature of storm water releases, which may vary considerably due to natural causes. However, mine-related groundwater production limits are regulated by the RRC, thereby indirectly limiting the volume of discharge from mine-related groundwater pumpage.

With respect to SAWS, effects from the potential water supply contract are not part of the Proposed Action, as discussed in Chapter 2.0 of the Draft EIS. The USACE has determined that describing potential impacts on streamflows and flooding from SAWS water conveyance alternatives would be speculative at this point in time. There is no correlation between the SAWS contract and the TPDES permit for the proposed mine. Under the TPDES permit, Alcoa would only be allowed to release mine waters, not municipal waters. Please see the response to general comment NEPA-3 in Section 4.5.1 of the Final EIS regarding potential permitting requirements for SAWS.

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The discharges from sedimentation ponds are not a volume or rate to cause major concern. The draft permit on file with the TNRCC is for unrestricted rates and flows, based on Horizon Environmental Services study for the published mitigation plan.

The volume and rates for discharges due to depressurization and dewatering may be omitted from the TPDES permit process because they are groundwaters being added *after* the sedimentation pond outfalls. The only analysis and impact assessment of the total mine discharge will be performed by the USACE in this study. The only protection to public health and property will occur through requirements in your permit to Alcoa.

The mitigation plan does not appear as though it includes any of the depressurization and dewatering volumes in its analysis because they are not 'managed' waters.

8.2 (pg 34 in app E) Alcoa has collected a substantial amount of baseline data in order to assess existing surface-water quantities and flow patterns for the proposed mine area.

8.2 (pg 34 in app E) Modeling results from this evaluation indicate that the proposed surface water-control plan will aid in sustaining flows downstream of the proposed Permit Area. Generally, *the amount of water leaving the permit area due to rainfall runoff will be slightly greater than before mining* and the peak rates of flow will be diminished. Reference to Table 8-3 Anticipated Water-Quantity Changes – Big Sandy Creek at Highway 290 for storm events (all event levels) indicate *peak flow rate of -3% and change in total runoff volume at +2%*.

8.2 (pg 35 in app E) Baseline monitoring indicates that stream-flow patterns in the region's creek and drainages are highly irregular, and that flow is non-existent or very low during many months of the year.

Observation 3:

The study has developed estimated volumes as follows:

3.2-82 Including average annual runoff, the range of releases at Outfall 002 is estimated to be 0 to 1.0 cfs (0 to 725 acre-feet per year), and at Outfall 003 it is estimated to be 3.3 to 8.7 cfs (2,400 to 6,300 acre feet per year). It should be noted that these estimates are based on average conditions; the actual rates would vary depending on pumping rates, mine water use, mitigation demands, and the occurrence of large storm events. Typical discharge rates likely would be somewhat smaller than the ranges presented but may increase substantially for periods of days or weeks following storms.

The study also made the following assumption:

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3.2-94 (Three Oaks with SAWS) In 2013, SAWS would begin to withdraw groundwater from the Three Oaks Mine area. Given current estimates of depressurization pumpage, dewatering pumpage, and localized industrial use on the average, this would result in removing the discharge contributions from the main channels of Big Sandy Creek and Middle Yegua Creek at the proposed TPDES outfalls.

The study does not consider any additional discharges to support the Alcoa/SAWS water contract, requiring a maximum of 60,000 acre feet per year. From the Alcoa/SAWS contract:

Article II – Water Supply – Section 2.01 Maximum Annual Quantity

Subject to the further terms and provisions of this Contract, Alcoa shall deliver to SAWS at the Point of Delivery, each year during the term of this Contract and any extension thereof, an amount of water not to exceed the Maximum Annual Quantity for that year, derived from the source specified in Section 2.02, below. *The Maximum Annual Quantity shall be 60,000 acre-feet of water per year*, unless the amount is reduced pursuant to Section 3.03 of this Contract or increased pursuant to Section 2.08 of this Contract. Alcoa and SAWS may agree in writing to specify the Maximum Annual Quantity in terms of an average annual amount of water over a defined number of consecutive calendar years, with peak-year use limited to a defined amount.

59-3

Article II – Water Supply – Section 2.08 Increases in Maximum Annual Quantity
If SAWS at any time during the term of this Contract or any extension thereof should desire more water derived from groundwater withdrawals within the Area, it shall give Alcoa written notice of the additional amount desired by SAWS

The referenced 'point of delivery' is not public knowledge, although news articles place it in the area of FM696 and US Hwy 290 on CPS property. Per the contract, the location was to have been specified by Alcoa by January 1, 2000.

Article III – Facilities and Lands – Section 3.03 Timing and Development

(a) Within 12 months after the date of this Contract, *Alcoa shall designate the proposed location of the Point of Delivery*. Unless Alcoa and SAWS agree otherwise, the Point of Delivery shall be a point chosen by Alcoa at or near Highway 290 along the segment of that Highway that constitutes the southwest boundary of the area defined on Exhibit 1, or at any location chosen by Alcoa between that segment of Highway 290 and Highway 112.

Based on news reports after the contract signing, early 1999, one of the transport options reported to the public by SAWS was to use existing surface waterways to get the water to the Colorado River. In fact, later developments should leave one to believe this plan has a high probability, as evident in the January 29, 2001 press release from LCRA stating a contract was signed with SAWS that will create off-channel storage ponds

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downstream from Austin (copy of press release enclosed) to hold excess Colorado River flows.

The discharge impact analysis must include the 40,000 to 60,000 acre feet per year for SAWS delivery as does the groundwater pumping analysis.

59-3 3.2-32 (Cumulative Groundwater Scenarios) includes a scenario for municipal groundwater for the city of San Antonio at up to 66,000 acre feet per year.

Therefore, the discharge rate at Outfall 3, being the likely point of discharge for San Antonio groundwater, should be an additional 55.2 cfs to 82.9 cfs, placing the total Chocolate Creek volume range at 58.5 cfs to 91.6 cfs.

Reference Documents: (4) LCRA Press Release

Observation 4:

Alcoa has no mitigation responsibility for discharged water after it leaves the outfall at the mine boundary. From the Alcoa/SAWS contract:

Article II – Water Supply – Section 2.03 Title to, Possession, Control and Use of Water

59-4 (c) *SAWS agrees to indemnify and save Alcoa and its directors, officers and employees harmless from and against any and all claims, demands, suits, causes of action, judgements and costs thereof, including reasonable attorney's fees and expenses for or on account of damages caused by the water, or the quality of such water, after such water has been delivered to SAWS at the Point of Delivery.*

If the undisclosed SAWS point of delivery *is* outfall 3 at the mine boundary, Alcoa would *not* have to mitigate damages caused by flooding. This would include the low water crossing (not identified) referenced in the study. It is the responsibility of SAWS, and their answer would likely be the seizing of such properties being impacted if any complaints were made.

Observation 5:

59-5 The study does not include any analysis of flooding risks within the Big Sandy Creek and Chocolate Creek floodplains, as evident by the omission of references to Bastrop County FEMA maps in the reference materials on page 6-5. The study only uses data from the monitoring station for Big Sandy Creek that is located on US Hwy 290 in the McDade area, which I would estimate at more than 6 miles from Outfall 3.

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59-4 The commenter is inappropriately extending the referenced provision of the Alcoa/SAWS contract to discharges of storm water runoff and depressurization pumpage through planned Outfall 003 on Chocolate Creek. The issues of the SAWS contract in relation to the Three Oaks Mine and potential flooding of Chocolate Creek have been addressed in the responses to general comments NEPA-3 and SW-3 in Sections 4.5.1 and 4.5.5, respectively, of the Final EIS.

59-5 Please see the response to comment 59-1. Please see the response to general comment SW-3 in Section 4.5.5 of the Final EIS relative to potential flooding.

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3.2-82 Flows in Big Sandy, Chocolate, Lower Mine and Middle Yegua Creeks would be augmented by releases from the mine water control ponds and TPDES outfalls during the life of the mine. During this 25 year operational phase, the augmentation would provide flow on a more continuous basis than under baseline conditions. ***These increased flows would occur for a distance of approximately 4 to 6 miles downstream of the discharge locations.***

For your review, I've included copies of the FEMA Flood Insurance Rate Map panels (Map Numbers 48021C0075C and 48021C0150C) I obtained from the Bastrop County Health and Sanitation Department. I've also indicated the approximate location of my property. I am very concerned on the planned discharges by Alcoa. I estimate that I am located within ¼ mile of outfall 3 and my fence line is within feet of Chocolate Creek. That portion of my property is within the same floodplain as Chocolate Creek.

Reference Documents: (3) FEMA Floodplain Map for area with my property highlighted and Photos

Observation 6:

59-5

Much of the study information and data was obtained from Alcoa's mine permit application to the Texas Railroad Commission. I've enclosed a copy of parts of the June 27, 2001 initial RRC Staff Technical Analysis. Please note the following items that may impact information you extracted from their application as it relates to water quantities:

Page 27 – Alcoa notes that the Willow, Mine, and Chocolate Creeks have little sustained flow and generally only flow in direct response to precipitation events.

Page 27 – Alcoa states that in the vicinity of the proposed permit area all streams are classified as intermittent with some ephemeral segments. The streams have average longitudinal main channel gradients ranging from about 10 to 50 feet per mile.

Page 115 – Alcoa proposes to use stations LLS, LBS, UBS and LMY to monitor surface water quantity during the active mining phase.

Page 115 – Ground water discharges were not included in the peak flow total since estimated ground water contributions to surface water discharges are less than 15 cfs for the proposed permit term.

Page 115 - Alcoa provides a comparison of peak discharge rates and total runoff volumes under baseline and proposed active mining conditions for Big Sandy Creek at US 290.

In reviewing this initial analysis, there are several statements that should stand out.

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There are three creeks that only flow when it rains, and one of these is a major discharge route, being Chocolate Creek. Chocolate Creek, by my fence line, is only about 4 or 5 feet wide at certain points and maybe 3 feet deep, with a well defined channel through a wooded area. It is evident that no one has looked at this creek outside the permit area.

59-5 Ground water discharges were not included in peak flow analysis because they were so 'minor' – what's going to happen when 15 cps hits Chocolate Creek by my fence line? And, what's going to happen when spring rains are added to the Alcoa discharge?

Why are flows and rates being measured more than 6 miles from the discharge outfalls? Why was no floodplain impact study done for the first 6 six miles of the discharge routes? Why was the bulk of the discharge volume omitted from the permit application?

In all my reading, I've noted numerous statements indicating how diligent Alcoa has been in aerial photographs and numerous studies, how is it the floodplains were omitted from any analysis for mine discharges?

Reference Documents: (5) RRC Technical Analysis – selected pages

Observation 7:

59-6 The study does not consider the existing discharge permits for Big Sandy Creek. There are 2 recent permits issued to the brickyards for discharge to Big Sandy Creek in the area where Alcoa will discharge from Outfall 2. The brickyard discharges have raised the level of Big Sandy Creek at Old McDade Road by 3 (or more) feet from levels that are typical at this time of they year. None of the monitoring data for Big Sandy Creek in the study is from a time period when these flows were present.

Observation 8:

59-7 Alternatives to discharging waters to Big Sandy and Chocolate Creeks were identified, and rejected, due to the water belonging to SAWS and not available for use by Alcoa.

A-13 Water Reuse and Disposal Alternatives – The alternative exists for Three Oaks Mine water to be used for power plant cooling and other processes associated with the manufacturing activities. With this alternative, pumping for these purposes from the Sandow Mine would be replaced with a pipeline from the Three Oaks Mine. A new pipeline to replace the existing pipeline from the Sandow Mine to the Rockdale facilities would be much longer and more costly than using the existing facilities and would result in additional pumping costs.

Further, depressurization water from the Three Oaks Mine is owned by San Antonio Water System, and SAWS may not relinquish their water rights.

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59-6 Please see the response to comment 59-1. Please see the response to general comment SW-3 in Section 4.5.5 of the Final EIS relative to potential flooding.

59-7 The commenter is inappropriately extending the referenced provisions of the Alcoa/SAWS contract to discharges of depressurization water pumped from the Three Oaks Mine area. As explained in the excerpted sections from the Draft EIS in the comment, the water pumped from CPS lands, which constitute the majority of the Three Oaks Mine area, does not belong to Alcoa. The referenced Alcoa/SAWS contract provision would be applicable to water pumped from Alcoa-owned lands in the Sandow Mine area. Also see the response to general comment NEPA-3 in Section 4.5.1 of the Final EIS relative to SAWS contracts.

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For these reasons, this alternative has been determined not to be practical and has not been considered further by Alcoa.

A-13 Aquifer ReInjection/Reinfiltration at Simsboro Outcrop – This disposal approach would tend to accelerate the recovery of the aquifer drawdown resulting from the Sandow Mine. Negative considerations for Alcoa include: 1) *the cost of acquiring, if possible, the necessary water rights from SAWS.....* Alcoa has estimated the cost of pipeline, pumping facilities and infiltration basins for this alternative to be approximately \$75 million, without including the cost of acquiring the water rights (Hodges 2002).

But, according to the Alcoa/SAWS contract, ownership and control of water is the opposite of what's stated in the study:

59-7

Article II – Water Supply – Section 2.03 Title to, Possession, Control and Use of Water

(a) *Title to, possession and control of water shall remain in Alcoa until such time as the water is delivered to SAWS at the Point of Delivery, after which title to, possession and control of such water shall pass to SAWS.*

Article II – Water Supply – Section 2.09 Water for Alcoa and Others

(a) *Nothing in this Contract shall in any way prohibit or restrict Alcoa from withdrawing any groundwater or supplying water to itself or third parties, at any time, in any amounts and for any purpose, from any existing or future well within the Area or any other lands or interests in lands currently owned by Alcoa or that Alcoa may acquire in the future, or from utilizing the Facilities, at any time and for any purpose, so long as Alcoa supplies water to SAWS in accordance with the terms of this Contract.*

Observation 9:

After Chocolate Creek passes my property, and before it reaches Big Sandy Creek, it travels past one of the brickyards. Over the years, prior to any environmental laws, the brickyard used whatever was available to fill and level their manufacturing facility lands. Prior to converting to natural gas, I believe the brickyards used lignite to fire their ovens. The material used as fill appears to be coal ash and lignite – it's very black in color. There are also large piles of discarded brick over this area.

59-8

At issue, what contaminates will be introduced to Chocolate and Big Sandy Creek when the Alcoa releases cause flooding in this area. It's all in the same floodplain and in the area where these two creek meet.

Observation 10:

59-8

Please see the response to general comment SW-3 in Section 4.5.5 of the Final EIS relative to potential flooding. Data or information for the materials disposed of at the brickyards are not available. A brief review of historical water quality violations was done through TCEQ's records, and no recorded violations were identified. If consistent water quality violations occur from brickyard discharges, both USEPA and TCEQ would implement enforcement measures (Davenport 2002). Any contaminants present in the floodplain at the confluence of Big Sandy Creek and Chocolate Creek have undoubtedly been exposed to repeated flooding events of similar magnitude over many years. If present, they are part of the current baseline condition, reflected in baseline water quality data. Alcoa's discharge of storm waters meeting TCEQ's discharge criteria and depressurization water as characterized in this EIS is not expected to contribute new contaminants.

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From the study:

3.2-83 The flow rate from the discharges to the Big Sandy and Middle Yegua watersheds would not affect channel or bank morphology, nor would the increase the flooding hazard. It is *assumed* that outlet structures would be designed to ensure stream stability through the use of designs similar to those used for sediment pond outlets and diversion channels.

3.2-83 Channel and bank morphology typically are determined by bankfull flows, which are often estimated as the peak flow having a recurrence interval of 2.33 years.

It is not wise to *assume* outlet structures will be designed in any manner other than the cheapest method available. Alcoa is motivated by cost savings, not what is best for the environment or neighboring residents. Unless very specific requirements and restrictions are placed on Alcoa, it will not happen voluntarily. Alcoa will not provide any information suggesting adverse affects from their planned mining operations. Such information must be specifically asked.

Attached is a June 27, 2002 letter from LCRA to TNRCC regarding concerns on Alcoa's pending TPDES permit 04348, TX0124311. LCRA expresses concerns on many deficiencies in this permit. Among the deficiencies is the lack of any analysis or study on flow impacts to Big Sandy Creek, the risk of severe erosion, and other problems associated with erosion.

LCRA also states that TNRCC needs to coordinate with USACE's EIS for Alcoa's operation, stating that *your* study will determine any direct adverse impacts to the waters of the US. Please refer back to Observation 1, the study assumes TNRCC is doing a thorough review of the application and will be addressing such issues. But, referring back to Observation 1, TNRCC Executive Director has already stated the Alcoa permit is complete and he sees no reason for the Alcoa permit to not be issued as is. Again, in addition to no floodplain analysis, there is no analysis of erosion on Big Sandy or Chocolate Creeks. The permit hearing is scheduled for January 2003 and it appears that even with these deficiencies, the permit will be granted.

Reference Documents: (6) LCRA letter to TNRCC

Observation 11:

Discharges volumes and rates implied by Alcoa do not make sense when compared to historic discharges from Sandow Mine.

3.2-93 In recent years, an estimated combined annual average of approximately 28 cfs (20,300 acre feet) has been discharged from the Sandow mine into

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59-9 Alcoa would be required to construct and maintain stable outlet structures using standard engineering practices, in accordance with RRC regulations (16 TAC Part 1, Chapter 12, Subchapter K, Division 2, Rule 12.345). Similar regulations are in effect from the federal Office of Surface Mining (30 CFR 816.47). Mitigation measure SW-2 on pages 3.2-97 and 3.2-97a of the Final EIS has been modified to incorporate downstream stabilization activities for Chocolate Creek and its unnamed south tributary, as needed. TCEQ has responded independently to the comments it received relative to Alcoa's application for the TPDES permit.

59-10 The estimated pumping needs for the Three Oaks Mine are based on numerical groundwater modeling. The size of the pits, the depths of the pits, the thickness of the overburden, and the aquifer properties at the Three Oaks Mine are different from those at the Sandow Mine. Thus, the pumping rates and estimated pumping volumes differ from historical pumping at Sandow. The pumping estimates provided in the Draft EIS are conservative (i.e., reflect the expected upper range of pumping estimates). Information relative to the volume of water pumped from the Sandow Mine is available in Alcoa's annual underburden pumpage reports to the RRC. Information relative to pit depths is provided in Section 2.5.2.6 of the Draft EIS for the Three Oaks Mine and is available in the existing Mine Permit 1E for the Sandow Mine.

59-9

59-10

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Walleye and East Yegua Creeks as a result of ground water management at that mine.

3.2-93 Depending on the actual discharge volume at one time and its distribution between the creeks, augmented flows likely have occurred for 10 to 15 miles downstream of the discharge points.

This statement is supported by Table C 8 on page C-13 and titled Average Sandow Mine Pumpage Discharges. The table defined the values as estimated for the period 1983 to 2001, based on Sandow well field pumping history and a consumption of 5,000 acre feet per year at the Sandow facilities.

In year 5 of Alcoa's plan, operations will have ceased at Sandow Mine and Three Oaks Mine should be in full production. As the mine moves eastward with 2 drag lines in operation, one would expect pumping discharges to increase to levels similar to that of the Sandow Mine, levels of 28 cfs.

Table 3.2-13 on Page 3.2-82

Mine Year	Approx Pumping Discharge (acre feet per year)	Approx Pumping Discharge (cfs)
1	2,800	3.9
2	2,700	3.7
3	3,500	4.8
4	5,500	7.6
5	5,300	7.3
6-10	5,700	7.9
11-15	7,400	10.2
16-20	9,800	13.5
21-25	10,600	14.6

As the table indicates, the maximum pumping rate will only be one half. I know pumping volume will be a factor of the depth of the pit, but for this to represent a 13 cfs difference does not seem reasonable.

Also, the averages for Sandow Mine are for an extremely long period. Are there any references available to indicate the depths of the pit and volume of water removed?

Observation 12:

From my property, I can view different areas of Chocolate Creeks path from what will be outfall 3. Several of these areas appear to have grasses and features typical of wetlands. Has any analysis been made of wetland impacts along the discharge routes after the outfall? I know you cannot drain or disturb wetlands, but is it allowable to flood them?

59-11 The presence of wetlands along the lower reaches of Chocolate Creek is probable since wetlands are present along Chocolate Creek within the permit area (see Figure 3.2-26 in the Draft EIS). However, as discharges from Outfall 003 generally mimic pre-disturbance discharges (rates and volumes), wetland hydrology downstream should not be significantly altered.

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Subject: Public Comment to Three Oaks Mine Draft EIS –Surface Water Controls
From: Judy S. Ellis
168 Potato Smith Road (aka: CR 126 Bastrop County)
Elgin, Texas 78821

Observation 13:

From the study:

3.2-93 Including annual runoff, the overall range of combined releases into lower Big Sandy is estimated to be 3.3 to 9.7 cfs (2,400 to 7,000 acre feet per year). Typically discharge rates likely would be somewhat smaller than the ranges presented; however, it may increase substantially for periods of days or weeks following storms.

59-12 On page C-11, Table C-6, shows the current average annual flow for Big Sandy Creek at US Hwy 290 near McDade as 8.8 cfs. Again, the numbers do not seem reasonable. If the current storm run off creates an annual 8.8 cfs flow, and the new rate including annual runoff is 9.7 cfs, that's an increase of only .9 cfs to account for ground water pumping when the table in Observation 11 has pumping discharges at 3.9 cfs for year 1, increasing to 14.6 cfs in the late years of the mine. I know the discharges are to two different outfalls, but in the later years of the mine, at least half should be to outfall 3 (based on the planned mine operation map in the study).

Observation 14:

From references in the study, Alcoa's discharge permit application was from 2001-c. Modifications have been made to this permit as late as May 6, 2002, prompted by a letter from Alcoa dated April 3, 2002. I would like the study to include the latest permit. I would like to also note possible permit issues:

- 59-13
- According to the permit history, the TNRCC administrative reviewer received the permit application/NOI on 5/31/01. The permit was then recorded as having the administrative review completed on 8/10/01. The general TXR050000 permit did not become available until 8/21/01 and has requirements that may not be covered under the old Industrial Wastewater permit Alcoa was seeking. Some of these requirements are an erosion study on receiving streams, inspection of reasonably accessible areas immediately downstream, explicitly states the permit does not grant or convey property rights, and requires the duty to mitigate (which under the Saws water contract, Alcoa is relieved of such responsibility).
 - Alcoa's permit may not expire until 2010 (per their request) have requested. Permits are to be good for only 5 years. Such an extension would prevent public comment or input in 5 years that may change permit requirements.

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59-12 Flows presented on page 3.2-93 of the Draft EIS represent the mining-related discharges, not total flow in Big Sandy Creek, as assumed by the commenter. The data shown in Table C-6 of the Draft EIS represent averages over the period of monitoring at the locations listed. Those periods range from 5 or 6 years to several decades. The table is not intended to imply that the average discharges occur all of the time. In contrast, much of the time these streams are dry or nearly dry. At other times, however, seasonal flows or much larger storm flows occur in the streams. All of these conditions are accounted for in calculating the average flow. Because of this, additional investigations into potential flooding have examined the rarer storm events as well as the more common conditions anticipated from proposed mine discharges. The text has been revised in the Final EIS (see pages 3.2-71 through 3.2-71c and 3.2-94).

59-13 Comment noted regarding TCEQ (formerly TNRCC) TPDES permit requirements. Relative to the comments regarding Outfall 002, omissions in the site maps, and Alcoa's TCEQ approval to exclude part of the application, these TPDES permit issues have not affected the analyses in the Three Oaks Mine EIS.

The TPDES permit would expire September 1, 2006. The RRC permit term is 5 years, at which time a permit renewal would be required.

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168 Potato Smith Road (aka: CR 126 Bastrop County)
Elgin, Texas 78621

- Alcoa requested and received an increase of TSS and BOD limit at outfall 2, from 45 to 65 mg/L.
- Outfall 2, Big Sandy Creek is designated as perennial. Outfall 3, Chocolate Creek, is designated as intermittent. Application requirements designate the listing of any perennial streams that intermittent streams empty into. For Chocolate Creek, no such designation is made. This omission may have impacted the administrative review of the permit.
- Site Maps requirements defined within the application omitted many properties and misidentified a school. The application clearly states that property owners bordering the applicant's property must be identified and land owners whose land is adjacent to the discharge route for the first mile must be identified. I meet both those categories, yet I am not identified as an affected property owner. This application also states it used the County Appraisal District Records to determine property ownership. For Bastrop County, that will be the aerial plot maps, and I know those map show my property meeting both those categories. If such an omission occurred with my property, it is likely more affected property owner's have been missed.
- Alcoa asked from, and received, approval to not complete the section of the application for Determination of Physical Characteristics of a Water Body. This section may have provided the information needed to accesses erosion and flooding impact studies. The applicant's note states they were allowed to omit this study because there was no DO/BOD impact, where other portions of this permit deal with BOD requirements.

Reference Documents: (7) Alcoa TPDES Permit related documents

In closing, I would like to voice my displeasure with the format of the public session at Elgin High School. I am a contesting party in Alcoa's TPDES permit process due to the lack of floodplain and erosion analysis. Your Mitigation booth was staffed by Alcoa 'contract' personnel. Throughout the evening, I observed the 'Alcoa' personnel frequently present and listening in (probably recording) conversations at various other booths. While I was at the Surface Water Control booth, there was an individual who made several trips over to videotape what was being shown to Mr. Burrell, along with almost constant presence of a Mitigation person. I know content of conversations were turned over to Alcoa because a statement I made about 'having property bordering the mine and adjacent to Chocolate Creek, and I never received any notice of Alcoa's TPDES permit' ended up on my discovery request from Alcoa. My lack of notification was a 'nit' and I was not going to raise this as an issue in the permit hearing, but due to 'big ears' it has become an issue (probably to my benefit). This behavior does not bother me, but it was intimidating to many others, especially in light of Alcoa telling

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59-14 The USACE conducted the public information meeting with the assistance of the third-party EIS contractor and selected representatives of the applicant and the applicant's technical contractors to assist members of the public in learning more about the proposed project and resolving their questions regarding the Draft EIS. No members of the USACE, the third-party contractor, or representatives of the applicant were involved in videotaping the session. The meeting was open to the public, and members of the media were allowed to attend and videotape activities or discussions of potential interest to their audience.

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59-14

Bastrop County they will be sued for \$120 million if the road changes are not approved. After observing the blatant actions of Alcoa's contractors (their name tags had 'ALCOA' in very big letters), people who wanted to make comment or ask questions did not due to fears of Alcoa getting even. If there is another public information session like this one, I would suggest for any Alcoa related person to stay in their booth and be less intimidating to the public attendees.

I look forward to receiving your responses to the observation I have noted.

Sincerely;



Judy S. Ellis
168 Potato Smith Road
Elgin, TX 78621

512-281-4319

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INDEX of SUPPORTING DOCUMENTATION

1. Copy of TNRCC Web Pages for TPDES Permits

Tiffany Brick Company	WQ0003720/TX0118630	Seq: 1428
Acme Brick Company	WQ0000444/TX0108103	Seq: 1428
Elgin Butler Brick Co	WQ0001414/TX0105309	Seq: 1428

2. TCEQ Executive Director's Statement on Alcoa Draft Permit presented on SOAH Docket No. 582-02-3008 TCEQ Docket No. 2002-0484-IWD – TNRCC response to Request For Disclosure from ALCOA.

3. FEMA Floodplain Map – portions of Maps 48021C0075C and 48021C0150C for affected area with my property highlighted.

4. Copy of LCRA Web Pages for LCRA Press Release – January 29, 2001

5. Copy of Texas Railroad Commission's initial Three Oaks Mine Technical Analysis – June 27, 2001 (select pages) from the RRC's Website

6. LCRA letter to TNRCC dated Jun 27, 2002 presented with SOAH Docket No. 582-02-3008 TCEQ Docket No. 2002-0484-IWD – LCRA response to Request For Disclosure from ALCOA.

7. Alcoa Discharge Permit 04348 related:
 - A. From TNRCC website, Permit History for Alcoa permit 04348 for type TXR050000
 - B. From TNRCC website, TPDES General Permit TXR05000, selected pages from General Permit Requirements.
 - C. From the TNRCC permit work folder available for public review, Statement of Basis/Technical Summary and Executive Director's Preliminary Decision.
 - D. From the TNRCC permit work folder available for public review, Alcoa letter to TNRCC on Draft TPDES Permit No. 04348 Alcoa Three Oaks Mine.
 - E. From the TNRCC permit work folder available for public review, Alcoa's permit application pages for Outfall 2 – Big Sandy Creek.

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F. From the TNRCC permit work folder available for public review, Alcoa's permit application pages for Outfall 3 – Chocolate Creek.

G. From the TNRCC permit work folder available for public review, Alcoa's permit application pages Site Maps covering the requirement to identify schools, property owners whose lands border the applicants property, property owners whose lands are adjacent to the discharge route for a distance of 1 mile downstream from the point of discharge, and source of property ownership determination as per records at Bastrop County Appraisal District.

H. From the TNRCC permit work folder available for public review, Alcoa's permit application, the list of identified affected property owners.

I. From the TNRCC permit work folder available for public review, Alcoa's permit application page covering supplying information on receiving stream's physical characteristics.

References to Documentation Already in USACE Possession

Alcoa / SAWS Water Supply Contract dated 12/31/98

Alcoa TPDES Permit Application 2001c

COMPARISON PHOTOS

1. Big Sandy Creek at Old McDade Road – in fall of 1999 prior to any permitted discharges, on 10/17/02 after extended dry period with permitted discharges, and 10/19/02 after 2.7 in rain. Photo is taken facing in a northerly direction, looking at CPS land.
2. Big Sandy Creek at Old McDade Road – on 10/17/02 and 10/19/02. Photo is taken facing a southerly direction, looking at railroad bridge.
3. Big Sandy Creek floodplain along Old McDade Road about 50 yards east of creek bed. In this area, there is a culvert that runs under the road allowing floodwaters on the north side of the road to flow to the south side of the road. Photos taken on 10/17/02 and 10/19/02.
4. Big Sandy Creek floodwaters covering Old McDade Road – the first photo date is not know, but was taken just west of Gene Scott Road. The second photo, taken on 10/17/02 is in what I believe to be the same general area. Big Sandy Creek flooding with spring rains is not uncommon, and water usually recede within hours after rains stop.

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5. Chocolate Creek, a major discharge route for Alcoa waters, as it appears near my fence line. Photos taken on 10/17/02 and 10/19/02.
6. Low water crossing on Potato Smith Road on 10/17/02 and 10/19/02. This is an unnamed creek that flows from a small lake to the east and empties into Big Sandy Creek to the west. In the spring, this crossing is frequently covered, but passable if Big Sandy Creek is not flooding. Once Big Sandy Creek floods, those waters flood back to this area making the low water crossing impassable. Photos were taken on 10/17/02 and 10/19/02.
7. From the low water crossing on Potato Smith Road looking west on 10/17/02 and 10/19/02.
8. Big Sandy Creek at Old McDade Road on the south side, being the area between the road bridge and railroad bridge. Photos taken on 10/17/02 and 10/19/02.

OTHER PHOTOS

Note: Refer to location map to determine location taken. All photos taken with 50mm lens unless noted. All photos taken on 10-17-02 unless otherwise noted.

ID	Loon Taken	Description	Ref
1	L1	Ball used to show size in some photos	R1-6A
2	L1	Level tripod used to show relationship of Chocolate Creek to my property	R1-22A
3	L1	My pasture area – northern side - taken on the leveled tripod. There is a long water filled clay pit a short distance from my fence line.	R1-21A
4	L1	My pasture area – northwest corner and west fence line – taken on the leveled tripod. Chocolate Creek runs in the wooded area just beyond my fence line. This is a 100 year floodplain.	R1-10A
5	L1	My pasture area – west fence line – taken on the leveled tripod. Chocolate Creek runs in the wooded area just beyond my fence line. This is a 100 year floodplain.	R-11A
6	L1	My pasture area – west fence line to southwest corner – taken on the leveled tripod. Chocolate Creek runs in the wooded area just beyond my fence line. This is a 100 year floodplain.	R-13A
7	L1	My pasture area – south fence line to southwest corner – taken on the leveled tripod. This is a 100 year floodplain.	R1-14A
8	L3	Power line that runs through my pasture and will be running through areas of Chocolate Creek that will have discharged Alcoa waters. These poles are old and badly weathered.	R2-12
9	L2	My back fence line, facing south	R2-3
10	L2	My back fence line, facing north	R2-2

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11	L2	From my back fence line, facing east	R2-1
12	L2	From my back fence line, facing west, Chocolate Creek.	R2-4
13	L2	From my back fence line, facing west, Chocolate Creek. The ball in setting on the bank edge.	R2-8
14	L2	Chocolate Creek channel. Channel width varies from approx 4 feet to approx 10 feet. I estimate depth at no more than 3 feet.	R2-9
15	L2	Chocolate Creek channel. Ball in channel on near side.	R2-10
16	L2	Taken on 10/19/02, from my back fence line, Chocolate Creek after a 2.7" rainfall during a 12 hour period.	R5-12
17	L2	Taken on 10/19/02, from my back fence line, Chocolate Creek after a 2.7" rainfall during a 12 hour period.	R5-10
18	L6	Old McDade Road bridge over Big Sandy Creek, taken from the east side facing the northwest. The land behind the bridge is CPS property and it floods with spring rains.	R3-4
19	L5	Big Sandy Creek on the north side of the bridge at Old McDade Road. The land behind the creek is CPS property and it floods with spring rains.	R2-25
20	L6	Big Sandy Creek on south side of bridge	R3-3
21	L5	Area between Old McDade Road and railroad tracks, south side of road, about 100 feet west of bridge – taken on 10/19/02 after 2.7" rain in 12 hour period. When Big Sandy levels rise, the flow is restricted first by the road's bridge, then the railroad bridge. The waters spread along the north side of the road, then on the south side of the road between the road bed and railroad tracks.	R5-6
22	L13	Potato Smith Road low water crossing area, taken from Old McDade road, facing north.	R4-1
23	L1	From my pasture area, the brickyard, taken with a 300mm lens. Shows debris piles that may be subjected to floodwaters from Chocolate Creek. Also shows what may be wetlands.	R1-24A
24	L1	From my pasture area, the brickyard, taken with a 300mm lens. Shows debris piles that may be subjected to floodwaters from Chocolate Creek.	R1-23A

199900331 JW



US Army Corps of Engineers Fort Worth District

U.S. Army Corps of Engineers Three Oaks Mine Draft EIS Public Comments



PLEASE PRINT CLEARLY

Name	Agency/Organization	Mailing Address
JUDY S. ELLIS	- NONE -	168 POTATO SMITH ROAD EUGIN, TX 78621
Three Oaks Mine Draft EIS - Comments		
PLEASE REFER TO ATTACHED - COVER'S CONCERNS AND ISSUES FOR:		
NOISE (3.12-1)		
AIR QUALITY (3.8)		
PROPERTY VALUES (3.10-15)		
POPULATION (3.10.1.1)		
TAXES (3.10-14)		
PUBLIC HEALTH (3.14)		
TRANSPORTATION (3.11)		
LAND USE AND RECREATION (3.9)		
THANK YOU		
JUDY S. ELLIS		

Mail comments to: Ms. Jennifer Walker, Regulatory Project Manager, Regulatory Branch, CESWF-PER-R, U.S. Army Corps of Engineers, P.O. Box 17300, Fort Worth, TX 76102-0300

Email comments to: 3oakseis@swf.usace.army.mil

Must be received by: October 22, 2002

OCT 31 2002

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Subject: Public Comment to Three Oaks Mine Draft EIS
From: Judy S. Ellis
168 Potato Smith Road (aka: CR 126 Bastrop County)
Elgin, Texas 78621

Attached is your Figure 3.12-1 on which I indicated the location of my home. (I'm the one who had the miss bound book, so please do not take offense that I removed pages from it. I thought it would make your review easier.)

In Figure 3.12-1, the area in which my home is located is within the blue line on CR 126, which is less than .5 miles from the disturbance area. Also, in the immediate area are the Serl's; not indicated on the map but added for your benefit, the Smith's; my mother's home and the 7th Day Adventist Church School (this is a private school for grades Kindergarten through about 9th grade with daily student attendance). The youngest property owner in this immediate area is age 50 and the oldest is 79, with myself being the newest resident having purchased my home in 1992 (my mother moved onto my property around 1995, purchasing the mobile home in which she resides). If you follow CR126 south to Old McDade Road, through the 1000 foot line, the next property owner is Davis (an elderly woman who lives alone), the Houghtling's (again a 50 year old property owner) and the Reinhart's (over age 60). These homes are in an area that will be greatly affected by years 6 to 25 of Alcoa's mining operations, or better put, for a period of 20 years.

We are the casualties of Alcoa's cheap fuel source. We own our property, we are in the older age categories, we have limited incomes, we cannot afford to be taking off work or making expenditures to protect our lives and property from Alcoa's actions. We welcomed your study, hoping you would include the impact on those long time residents who by no choice of their own, are being greatly impacted by Alcoa's and San Antonio's actions. For us, there is no upside. In reality, the report generally is stating no impact from Three Oaks Mine.

Issue raised by your study include:

Noise (3.12.1) – Your study states that HUD and USEPA consider average outdoor noise levels in excess of 65 decibels on the A weighted scale to be normally unacceptable for residential areas and other noise sensitive land uses. The area in which I live will have a long term exposure to added noise levels, from year 6 to the end of the mine's life. Has any study or review been performed to judge the impact of excess noise, that being more than 10 db above what one is used to and according to your study the threshold for citizen complaints, on elderly and children in a school? In the draft EIS, I see no reference to a school or the impact on the children's education process. Also, what is the impact of noise on livestock kept in this area? The summation of the study is that there will be noise, there will be complaints, but it's all short term and will go away in 25 years. I would like to see the medical related impacts on human lives, such as increased stress levels and the frequency of family violence when related stress levels increase. What protections can we as residents take to reduce the stress created by the nonstop noise that we are not accustomed to.

Air Quality (3.8) – In discussions of fugitive dust and pollutants, one very important pollinating source is missing and this is smoke generated by controlled burning of overburden. Until I had read your report, I assumed surface materials were to be placed at the bottom of pits, and not burned. The elderly, young and people with allergies and asthma (myself included) will be greatly affected by smoke from burning. I raise parrots and have many housed in an open outdoor aviary. I know from experience, smoke can be deadly to these birds. I also raise horses and know smoke impacts their health and I am sure other livestock are equally affected along with

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59-15 Comment noted.

59-16 The shortest distance from the mine blocks to the nearest residence in the commenter's vicinity is approximately 1,675 feet. At this distance, the only equipment that would generate noise in excess of the 65 dBA (L_{dn}) HUD threshold would be a dragline, and the time a dragline would be within the 65 dBA perimeter (approximately 1,774 feet; see Table 3.12-10 of the Draft EIS) would be a very small percentage of the time in the latter quarter of the 6- to 10-year time period and again in the latter quarter of the 11- to 15-year time period. The other residences and the church school would be expected to be slightly below the 65 dBA threshold throughout the mine life. In addition, the measured ambient noise level at the church school was 49 dBA L_{eq} (48 dBA L_{dn}). Consequently, the 10 dBA above ambient threshold in this area would be somewhat higher than the 47 dBA noted in Table 3.12-10 of the Draft EIS, indicating that this threshold would be exceeded for only a small percentage of the time during years 6 to 20 and very little, if at all, from years 21 to 25 because of the continual movement of the mining activity within the mine blocks.

With regard to health effects, no direct effects of noise on health have been demonstrated except for potential hearing loss at much higher noise levels than are projected for the area in question; see the revised text of page 3.14-4 of the Final EIS. We are unaware of any studies specific to the health effects of noise on the elderly or youth.

Regarding the school, the worst-case (dragline), daytime noise outdoors at the school would be approximately 57 dBA (L_{eq}). Concomitant noise levels indoors with the windows closed would be below 30 dBA, well below the level that would be disruptive to effective communication in a classroom setting (White and Walker 1982). Also see the response to general comment N-1 in Section 4.5.8 of the Final EIS relative to noise levels associated with common noise sources.

59-17 Open burning of surface debris from land clearing operations at the mine would be allowed only through TCEQ, local, and county open-burning permit processes. The permit process provides for such burning only under certain restrictive conditions, and only if there are no other practical alternatives to burning. Burning only is allowed downwind of or at least 300 feet from any structure containing sensitive receptors located on adjacent properties unless prior written approval is obtained from the adjacent occupant with possessory control. Time of day and wind speed restrictions also apply that further limit impacts on air quality (30TAC Sections 111.201-111.221). The Sandow Mine currently clears about 300 acres each year. Less than half the area, on average, contains large hardwoods that need to be burned. Most trees are cleared from April through September.

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From: Judy S. Ellis
168 Potato Smith Road (aka: CR 126 Bastrop County)
Elgin, Texas 78621

59-17 wildlife. For the next 25 years, how much smoke contamination will my property receive? What will be the health impacts to area residents and health impact to pets and livestock.

Social and Economic Values (3.10) – This is a big category:

59-18 1. **Property Values (3.10-15)** – The draft EIS states that the effects of the Three Oaks Mine on property values in the study area would vary over time. In the short term, it would be expected that residential property in close enough proximity to mining activity to see the disturbance area and hear the heavy equipment noise would be in less demand and therefore would experience a temporary decline in value. Your study concludes that after completion of mining activities and reclamation in an area, property values will rebound, or, upon completion of mining in 25 years. Your report does not indicate there is a particular group of effected people who will be adversely impacted due to the 'less demand' of these properties. This group is the older citizens, especially in the area of my home, myself included. Being in an age category where sale of their home will likely occur during a time when mining activities are within visual and hearing distance, they will be deprived of financial gains that one would expect when selling a home. The reduction of property values is unfair to a selected group of citizens in the area of Three Oaks Mine. In our particular area, we will have sight of mining activities from year 6 through 25. I've attached your Figure 3.3-2 to show the long term impact we will have.

59-19 2. **Population (3.10.1.1)** – The draft EIS generally states the area of Three Oaks Mine is rural and undeveloped. This is true, but it is not due to coincidence. This is a highly desired area with skyrocketing property values (at least it was prior to 1999). The area is undeveloped because there is no land available. San Antonio owns the vast majority of land and it is unavailable for public use.

59-20 3. **Taxes (3.10-14)** – Your draft EIS does not consider the negative effects on property tax caused by Alcoa's project, just the upside created by taxes on equipment and improvements:

- McDade school district will not experience any tax revenues from this project until sometime after year 10. They will be impacted the most by the negative tax factors.
- Privately held property in close proximity to the mine area will experience a drop in appraised value resulting in a reduction of taxes accessed. (Reference Property Values 3.10-15)
- Properties acquired by Alcoa typically have all surface improvements removed resulting in reductions of property values. Alcoa also has such property reclassified as Ag Exempt or Wildlife, further reducing it's taxable value, even though it is not actively used for those purposes.
- Most property in the project area is owned by San Antonio and leased for grazing. The grazing leases are providing some tax income to some taxing entity, maybe school taxes for area districts. Once Alcoa starts their project, all livestock will be removed, eliminating these taxes from leases.

Responses to Letter 59

59-18 Please refer to the response to general comment SE-3 in Section 4.5.10 of the Final EIS regarding property values.

59-19 Comment noted.

59-20 a. As noted in Section 3.10.2.1 of the Draft EIS, Texas school finance practices make local tax base changes of little direct importance to local school districts, so this concern is unfounded.

b. Please refer to the response to general comment SE-3 in Section 4.5.10 of the Final EIS regarding property values.

c. Please refer to the response to general comment SE-3 in Section 4.5.10 of the Final EIS regarding property values. CPS currently pays no property tax on its property due to the fact that CPS is owned by a municipality (San Antonio). Alcoa typically does not remove surface improvement until the mining operation gets close to a property. Normally, property that Alcoa acquires would have the same tax status as it did prior to Alcoa's acquisition. When a property becomes part of the 5-year mine plan, it would have a higher value (for tax purposes) than its value prior to being part of the 5-year mine block. Since CPS owns the majority of the land to be mined, most acreage within the 5-year mine block would change from non-taxed property to taxed property.

d. Livestock would remain on portions of the mine area not in an active mine block. Please refer to the response to general comment SE-3 in Section 4.5.10 of the Final EIS regarding property values.

e. This comment is based on an incorrect assumption that all mineral leases are taxed at all times whether or not those leases are producing minerals and income. In Texas, mineral leases on oil and gas, lignite, coal and other minerals are not assessed for property taxes until minerals are actively produced from the lease. Until production actually occurs, there is no way to reliably estimate the value of the reserves. Once a mine is in production, property taxes do apply and are based on the value of the mineral reserves. Please refer to the response to general comment SE-3 in Section 4.5.10 of the Final EIS regarding property values.

f. The commenter is correct regarding the presence of this clause in the SAWS contract. This is not a loophole for anything, but is a negotiated contract point. If the SAWS contracts require more lands than Alcoa controls, then SAWS is liable for the purchase and capitalization of such lands. Alcoa does not want to spend its capital in this case to support a SAWS need for more land. Any such lands purchased by SAWS would not be used in the Three Oaks Mining operation. As noted by the commenter, any land owned by a municipality is tax-exempt.

g. This comment is incorrect. At the time mining commences within a mining block, that land would be reclassified from agricultural use (Category D-1) to the more valuable minerals category (Category G). As long as the land remains categorized as being within an active mining block, property taxes would be based on the value of the minerals, estimated by a discounted cash flow (DCF) method, and on the value of equipment used for mining. When mining is completed, the land is reclaimed to agricultural or wildlife use. Reclaimed lands from lignite mines across Texas have been found to be more productive for agriculture than they were in their pre-mined state. (Please refer to the response to general comment SE-3 in Section 4.5.10 of the Final EIS regarding property values.) Hence, the long-term tax revenue from the land also should be enhanced, compared to pre-mine revenue potential.

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From: Judy S. Ellis
168 Potato Smith Road (aka: CR 126 Bastrop County)
Elgin, Texas 78621

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59-20
Cont'd

This comment also suggests that it would be 25 years before the land would be suitable for human use. This has not been the case at other mines, such as the Sandow Mine. Reclaimed land typically becomes productive for pasture, hay, livestock, and wildlife within a few years. Because of production from reclaimed areas, the Sandow Mine is a major supplier of hay to local livestock producers. In 2001, 4,891 tons of hay were produced and 2,460 tons of hay were sold from lands within the Sandow Mine area (Hodges 2003).

59-20

- San Antonio property is tax exempt based on CPS stating the lignite 'may' be used by them to generate power. CPS has no power facility equipped to burn lignite. CPS has no plans to build such a facility. State of Texas Tax Code 11.11, last modified in 1995, defines public property exemption as property used for public purposes. The CPS property is restricted and the public is not allowed access. Until CPS actually uses the lignite, the property is not used for public purposes and should therefore be taxable. 23.17 of the same code also defines mineral leases as being taxable, but Alcoa pays no taxes on their leases or the leases assumed by them from CPS. State of Texas Education Code Chapter 41 Equalized Wealth Level defines mineral property as taxable for education purposes when those interests are severed from the real property as a lease. Mineral property is taxable for education, but Alcoa does not pay any taxes on their leases or those leases assumed from CPS. In short, there is a large amount of land and mineral leases that should be taxed, but are not. Yes, once equipment moves to a mining block, the equipment is taxable; but there is a large amount of tax payments being avoided by Alcoa that impacts every property owner in the taxing entity.
- There is a clause in the Water Supply Contract between Alcoa and SAWS, Article III Section 3.03 c and d, where Alcoa can request for SAWS to acquire additional lands for them, and SAWS will hold title. This loophole may place more land in an exempt category, removing even more property from the tax rolls.
- Once property enters an active mining block, all property taxes stop and the land remains off the tax rolls until it is suitable for human and public use. If I remember correctly, once reclamation starts, it's many years before the land is 'settled' and 'stable', something like 25 years.

59-21

In 3.10.4 it is stated no monitoring or mitigation measures are being considered. Mitigation should be required on Alcoa's and City of San Antonio's part for those property owner's experiencing reduced property values if those properties were purchased prior to December 31, 1998 and sold during the life of the mine. Under State of Texas Government Code Chapter 2007 Private Real Property Rights Preservation Act, when a government entity takes an action causing a reduction in the market value of privately held real property, the owner of that property is allowed compensation.

59-22

Public Health (3.14) omits a major health threat to people who reside in the general area of this project. Your study includes an assessment of wildlife within the mine boundaries and length of time before it returns, but does not consider the flight and new habitat of that wildlife. Your study does not consider private property as the new habitat and the deadly nature of some of this wildlife. Four poisonous snake species reside in this area and many will leave, ending up in residential areas. Of these three, the most deadly is the Coral Snake. This snake typically attracts young children due to its color, and due to a child's small body parts, they are very susceptible to bites with venomous injection. In addition, there are nuisance animals such as coyotes that will be a threat to domestic livestock and pets, and skunks, scorpions, wild boar, to name a few, that could effect the health and well being of the general public. This section also omits the air quality issues mentioned earlier, namely smoke. It also neglects to evaluate long term exposure to fugitive dust and the accumulative impact over time on residents in the area. There are residents, like myself, who will be exposed to this dust for many years. Your analysis

59-23

59-21

Please refer to the response to general comment SE-3 in Section 4.5.10 of the Final EIS regarding property values. It is expected that there would be a short-term reduction of property values followed by a rebound to at least the pre-mine level and probably higher in many cases. Moreover, the Texas Government Code Chapter 2007, which provides a potentially aggrieved property owner the right to file suit against a Texas governmental entity or a political subdivision of the State to determine whether a taking has occurred, is not applicable to USACE, which is not a political subdivision of the State of Texas, nor the City of San Antonio, whose actions as a municipality are exempted under Texas Government Code Section 2007.003.b.1. The code also is not applicable to Alcoa, Inc. because it is a private entity.

59-22

As discussed in Section 3.5.2.1 of the Draft EIS, the total habitat disturbance in the project area would be 8,654 acres; however, habitat disturbance would occur incrementally over the 25-year life of the mine with approximately 640 acres of disturbance occurring at any given time. As a result, habitat disturbance is not expected to result in a marked increase in the dispersal of wildlife from the mine area into adjacent residential areas.

59-23

Please see the text in Section 3.8.1.3 of the Draft EIS for a discussion of National Ambient Air Quality Standards for applicability to human health and Section 3.8.2 of the Draft EIS for the discussion of potential air quality impacts.

Letter 59 Continued

October 28, 2002

Page: 4 of 5

Subject: Public Comment to Three Oaks Mine Draft EIS
From: Judy S. Ellis
168 Potato Smith Road (aka: CR 126 Bastrop County)
Elgin, Texas 78621

- 59-23 appears to be geared towards Alcoa employees, considering 8 hour days and 40 hour work weeks exposures, and not residents who will have 24 hour days and mine life time exposure.
- 59-24 **Transportation (3.11)** is not consistent with Alcoa's recently approved State of Texas permit for Three Oaks Mine. Bastrop County has not consented to Alcoa's desired road modifications, and will not be considering these changes until later this fall. The State of Texas has placed their review of FM696 and FM619 on hold, pending Bastrop County's review. Your total study assumes any and all Alcoa desired road modifications will take place. Granted, Alcoa has publicly stated it will sue Bastrop County for \$120,000,000 if their changes are not approved, but Bastrop County still needs to say yes. Your study should include the plan 2 option already approved by the Railroad Commission for no road changes and consider those impacts on the environment.
- 59-25 **Land Use and Recreation (3.9)** has Figure 3.9-1 that is incorrect where it identifies the property owned by Harold Smith as being controlled by a CPS Lease. The Smith's originally signed the lease with Phillips, which was returned due to signatures being required. The Smith's have a letter from Phillips stating the lease is not valid and requires signatures of several family members. Consent was never received from the other family members, and the lease was never signed. The Smith's have shown this letter to the Railroad Commission and were told that Alcoa has no claim on their property. But, the mine permit application and your documentation has never been revised. Also, there is some recreational use of land in this area – the county roads to be discontinued by Alcoa. These remote roads are used for bike riding and horseback riding because of the low traffic flows. I have used these roads for trail ridding, and when they are deeded over to Alcoa, I will no longer have this area available for recreation.
- 59-27 Your report is quite comprehensive, but does not tie sections together. Large portions of it seem as if it came directly from Alcoa's Mine Application permit. The report needs to include the impact on property and people within several miles of the mine boundaries during the life of the mine. Discoveries in one section, such as noise, should be included and accessed in other sections such as public health. I realize it is your objective to aid Alcoa in the operation of their mine, but you also have an obligation to totally explore the impact to the general public and advise Alcoa on how to reduce this impact.
- 59-28 Your report should also include a historic analysis of complaints alleged against Alcoa and their Sandow Mine activities, and mitigation of those complaints. On hearsay, Alcoa has a reputation of not mitigating area wells because the owners did not have enough documentation to prove the failure was directly related to their mining activities, even those wells on adjacent properties. In reality, very few area wells were mitigated by Alcoa, a small percentage of the total complaints.
- 59-29 Another area requiring investigation are those areas of Sandow Mine that were never reclaimed or inadequately reclaimed. There is a county road crossing the mine. The land on both sides is in very poor condition and has a white powder, possibly salt residue, in areas. I observed this in 1999. There are overgrown debris piles and water pits on the east side of the mine. When I asked an Alcoa employee about these deficiencies, I was told, by law they are not required to reclaim these lands because they were mined prior to any reclamation laws. If Alcoa is a company wanting to perform their mining activity with minimal impact on the environment, they would have reclaimed these area's on their own and not have our tax dollars do it for them.

Responses to Letter 59

- 59-24 Alcoa's alternate mine plan, as approved by the RRC, has been incorporated into Section 2.7 beginning on page 2-84 of the Final EIS. Environmental effects of this alternative are addressed in the applicable resource sections of Chapter 3.0. Also see the response to general comment Alternatives-3 in Section 4.5.2 of the Final EIS regarding the alternate mine plan.
- 59-25 An updated property map has been included in the Final EIS (see Figure 3.9-1 on page 3.9-3). As indicated in Figure 3.9-1, Alcoa maintains that the CPS lease on the subject property is valid. This is consistent with the RRC's review and approval of Alcoa's permit application.
- 59-26 Section 3.9.1 of the Draft EIS notes that there is some horseback riding and similar activities in the area. Public road rights-of-way would continue to be available for such activities in most cases; only the location of the roadways would change.
- 59-27 Please refer to the response to general comment NEPA-1 in Section 4.5.1 of the Final EIS regarding the USACE's use of information provided by Alcoa. The Draft EIS addressed impacts to property owners and resources potentially affected by the proposed Three Oaks Mine. Regarding repeating information in multiple sections of the EIS, NEPA encourages cross-referencing to avoid encyclopedic EIS documents; thus, impacts are generally addressed thoroughly in the most appropriate section of the document and cross-referenced on related sections.
- 59-28 In his testimony for the hearing on the unsuitability petition, Mr. Hodges of Alcoa summarized the company's well mitigation efforts at Sandow with the following points:
- Depressurization pumping commenced in 1988.
 - Alcoa has received a total of approximately 755 inquiries regarding private wells.
 - In approximately 300 cases, Alcoa determined that their mining activities had impacted the landowner's water supply and appropriate mitigation measures were implemented.
 - In 71 cases, the landowner has asked the RRC to intervene. In 70 of those cases, the RRC has agreed with Alcoa's conclusions regarding liability and mitigation. In the remaining case, RRC asked Alcoa to reconsider their findings and take additional action, which Alcoa did.
- 59-29 The commenter may be referring to an area that was mined prior to the Surface Mine Reclamation and Control Act and that was reclaimed by the RRC with Abandoned Mined Land (AML) funds. The referenced overgrown debris piles and water pits are likely in an area that was mined pre-law but not reclaimed because it was near Alcoa's F Area pits and possibly would be redisturbed. This area will be reclaimed by Alcoa if it is redisturbed or possibly with AML funds if it is not redisturbed. It should be noted that AML funds do not involve public tax monies; instead they are derived from production fees paid since 1977 by each company mining coal or lignite.

Letter 59 Continued

October 28, 2002

Page: 5 of 5

Subject: Public Comment to Three Oaks Mine Draft EIS
From: Judy S. Ellis
168 Potato Smith Road (aka: CR 126 Bastrop County)
Elgin, Texas 78621

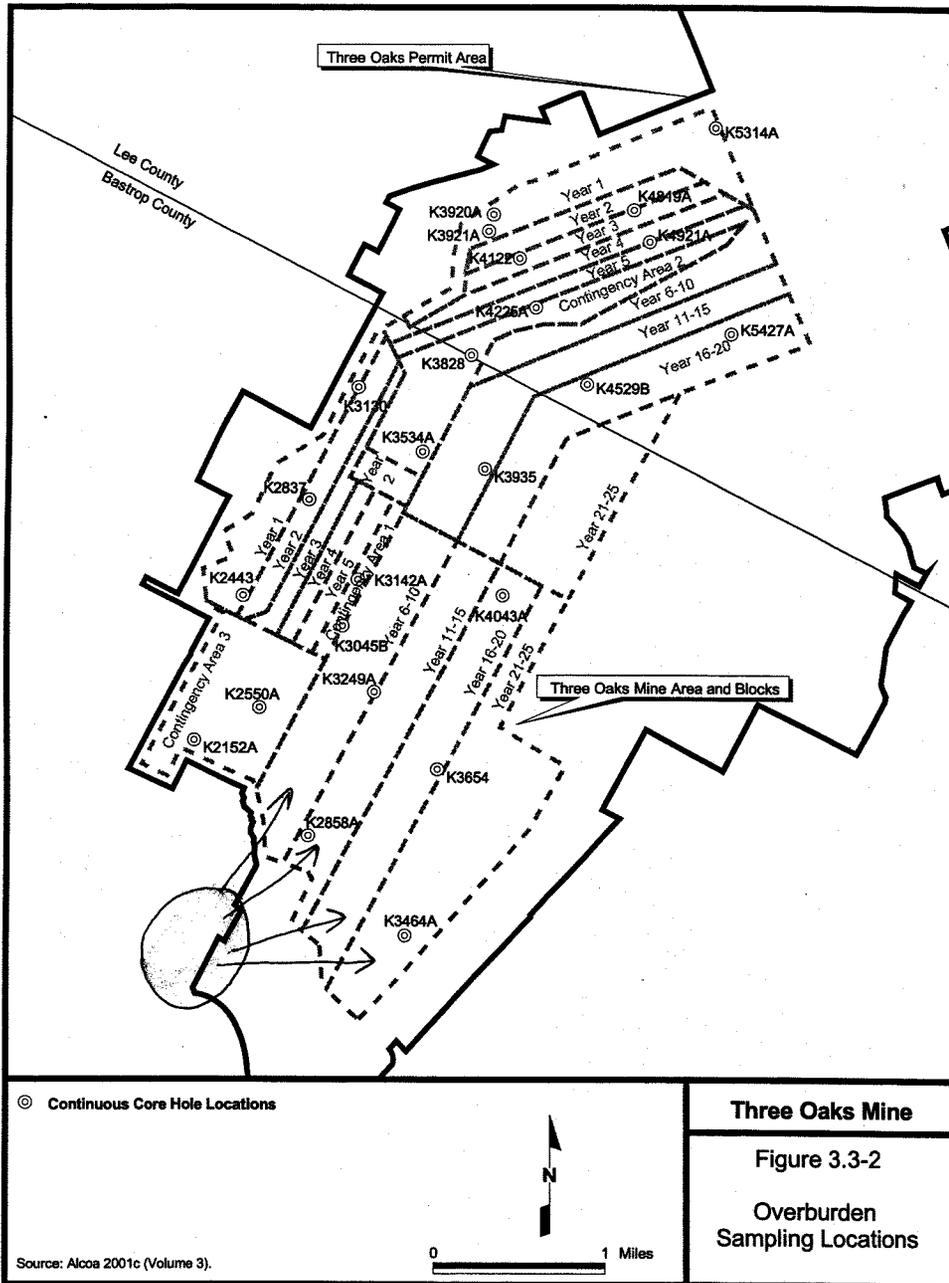
Based on these observations of Alcoa's past history, it is extremely important for your study to be very specific and widespread. This will be the only opportunity to insure this project will have minimal impact on the environment and general population.

Sincerely,



Judy S. Ellis

Letter 59 Continued



Letter 59 Continued

3.3 Soils

balance of sand, silt, and clay, and is not expected to display the adverse physical characteristics of the native topsoil (i.e., excessive sand or clay). In addition, the pH and acid/base relationship in the alternative growth media is anticipated to be more advantageous to crop growth than the native topsoil characteristics. To ensure reclamation success, growth media testing would occur after the growth media is applied to the recontoured surface as part of the reclamation program described in Section 2.5.3, Closure and Reclamation. Based on reclamation procedures practiced at the existing Sandow Mine, it is anticipated that successful site stabilization and restoration of productive post-mining land uses would occur at the Three Oaks Mine as required by RRC regulations.

Water Discharge

Based on the planned implementation of erosion control measures (e.g., sediment control ponds, diversion ditches, silt fences, straw bales, and revegetation measures), the potential for soil erosion as a result of surface water discharge is anticipated to be low. No indirect impacts to soils on prime farmland would occur as a result of water discharge.

3.3.2.2 No Action Alternative

The mine-related disturbance of 8,654 acres of soils would not occur under the No Action Alternative. As a result, the direct and indirect impacts as described for the Proposed Action would not occur under this alternative.

3.3.3 Cumulative Impacts

Past, present, and reasonably foreseeable future projects within the cumulative effects area that have resulted and will result in the removal and disturbance of native soils include the Sandow Mine, Rockdale power generating station and aluminum smelter, clay mining and brick manufacturing near Butler and Elgin, Powell Bend Mine, and Lost Pine 1 and Sim Gideon power generating stations, and any future residential and commercial development.

Surface disturbance of soils at the Sandow Mine will total approximately 15,103 acres, all of which will be reclaimed. Approximately 772 acres of this total will be reclaimed as ponds and end lakes. Based on an estimated pre-mining waters of the U.S. acreage of approximately 118 acres, there will be a net increase of approximately 654 acres of water features. As a result, there will be a loss of 654 acres of native soils at Sandow. Reclamation practices at Sandow are the same as described in Section 2.5.3.5, Revegetation, for the Three Oaks Mine. Approximately 100 acres and 275 acres of native soils have been disturbed at the Rockdale power generating station and the aluminum smelter, respectively, since the 1950s. In addition, approximately 895 acres of native soils have been lost to development of Alcoa Lake in association with the Rockdale facilities.

Clay mining and brick manufacturing in the Butler and Elgin area include approximately 1,355 acres in ownership and have collectively disturbed approximately 1,000 acres for clay pits and ancillary facilities. Based on limited information received from inquiries to these operations, it appears that at least a portion of this area ultimately will be reclaimed (50 percent assumed for this analysis) for lake-side residential

Letter 59 Continued

3.12 Noise and Visual Resources

3.12 Noise and Visual Resources

Noise and visual resource issues relate to potential impacts from the proposed mine and ancillary facilities on sensitive human receptors in proximity to the proposed project. Potential impacts to other resources are addressed in wildlife (Section 3.5.2) and air quality (Section 3.8.2).

3.12.1 Affected Environment

3.12.1.1 Noise

The study area for potential direct noise effects from the Three Oaks Mine encompasses areas within 3 to 5 miles of the permit area. Noise effects from other land uses may cumulatively affect noise-sensitive receptors in the same area; generally this may include projects up to another 5 miles away, or a total of 8 to 10 miles from the permit area, depending on the nature of the project or activity.

Describing the environment potentially affected by noise involves identifying noise-sensitive receptors and existing noise sources in the vicinity, characterizing terrain features that may affect noise transmission, and determining existing noise levels.

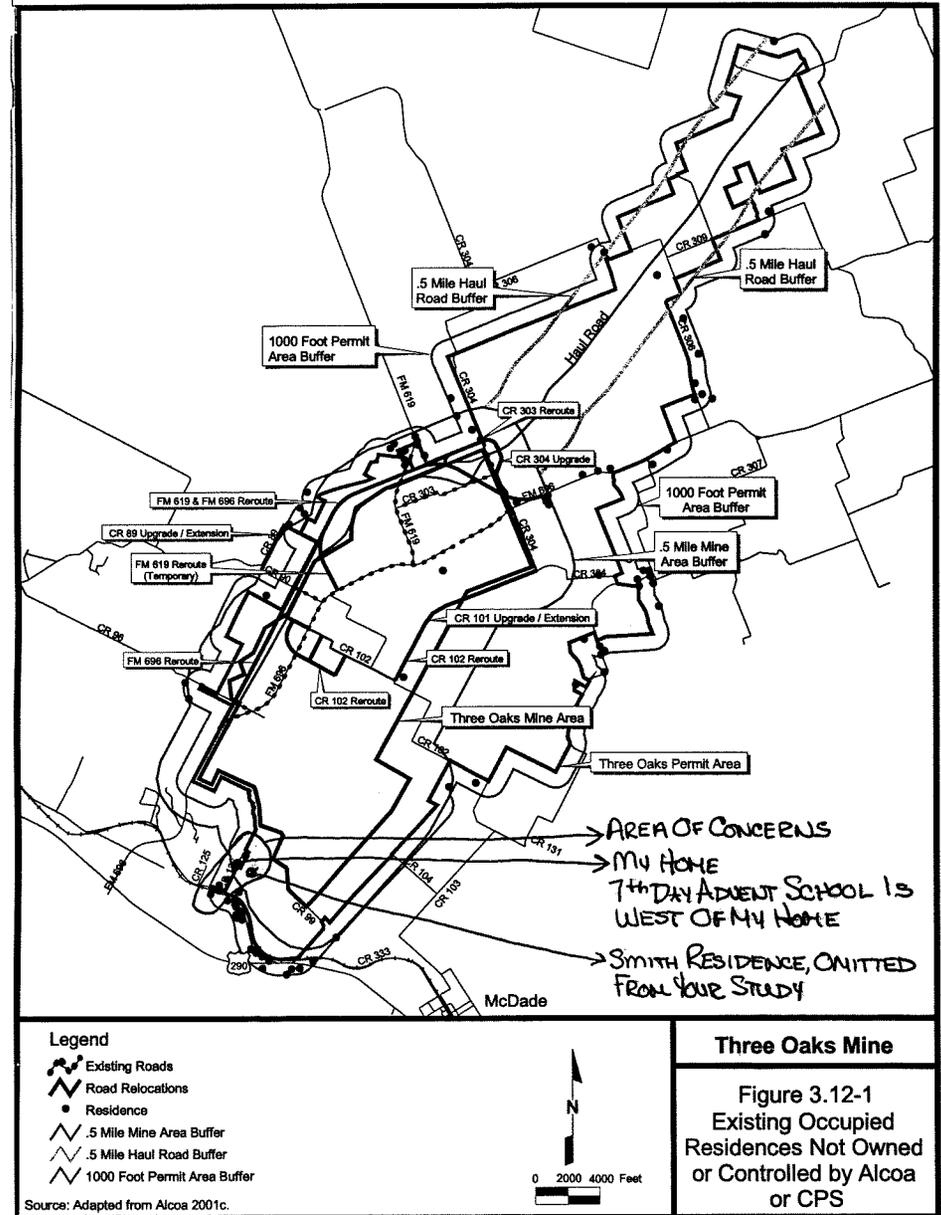
A baseline noise assessment was developed for the permit area using existing data for the region combined with sound measurements taken at selected receptors (Zephyr 2000). The resulting noise levels were compared with estimates prepared using USEPA, HUD, and FHWA techniques for selected areas.

Both HUD and USEPA consider average outdoor noise levels in excess of 65 decibels on the A-weighted scale (dBA) to be "normally unacceptable" for residential areas and other noise-sensitive land uses. Generally, all of the areas evaluated in and around the permit area are below that standard, with the possible exception of the U.S. Highway 290 corridor, where noise is dominated by high-speed traffic.

Noise-sensitive receptors in the study area are predominantly residences. There are approximately 125 residences within 1,000 feet of the mine permit area. Of those, the most sensitive are those closest to proposed high activity areas: 33 residences within 0.5 mile of the proposed mine disturbance area (9 of which are within the proposed disturbance area and would be removed), and an additional 11 residences within 0.5 mile of the proposed Three Oaks-to-Sandow haul road (see Figure 3.12-1).

The principal existing sources of noise in the study area are transportation corridors and the higher level of general human activity associated with population clusters in the communities of Butler and McDade. The most dominant source of noise is U.S. Highway 290, which carries an average of 13,416 vehicle trips per day (TxDOT 2000). Noise from U.S. Highway 290 traffic is perceivable as a background "drone" from as far as 2 miles away (Zephyr 2000). FM 696 carries 2,576 vehicle trips per day (TxDOT 2000), but at this level, traffic and the resultant noise are intermittent. Noise from other roads in the permit area is minor and sporadic due to much lower traffic volumes. Away from the human activity areas, noise emanates mainly from aircraft and from natural sounds, including wind, insects, birds, and domestic animals.

Letter 59 Continued



Letter 59 Continued

Attachments for Comment Letter 59

The following attachments were submitted with this comment letter. The attachments have not been reproduced in this Final EIS; the attachments have been addressed, as applicable, in the specific responses to the related comments. The attachments are on file with the USACE.

- Index of supporting documentation.
- Attachment 1 – excerpts from Alcoa/SAWS water contract dated December 31, 1998.
- Comparison photos pertaining to flooding issues:
 - Big Sandy Creek at Old McDade Road facing north
 - Big Sandy Creek at Old McDade Road facing south
 - 50 yards east of Big Sandy Creek and Old McDade Road facing south
 - 0.25 mile east of Big Sandy Creek and Old McDade Road
 - Chocolate Creek near commentors fence line
 - Low water crossing on Potato Smith Road (CR 126)
 - West of low water crossing on Potato Smith Road (CR 126)
 - South side of Big Sandy Creek and Old McDade Road
- Texas Natural Resource Conservation Commission (TNRCC). Industrial and Municipal (Domestic) Wastewater Permit Applications Query, IMWW Permit Applications Query Results. Web sites: <http://www.tnrcc.state.tx.us/cgi-bin/waste/imww/imwwquery.pl> and <http://www.tnrcc.state.tx.us/cgi-bin/waste/imww/imwwquery.pl?county=BASTROP&query.t>. October 20, 2002.
- Texas Natural Resource Conservation Commission (TNRCC). Industrial and Municipal (Domestic) Wastewater Permit Applications Query, IMWW Permit History, Tiffany Brick Company. Web site: http://www.tnrcc.state.tx.us/cgi-bin/waste/imww/imwwquery.pl?permit_number=WQ000372.0. October 20, 2002.
- Texas Natural Resource Conservation Commission (TNRCC). Industrial and Municipal (Domestic) Wastewater Permit Applications Query, IMWW Permit History, Acme Brick Company. Web site: http://www.tnrcc.state.tx.us/cgi-bin/waste/imww/imwwquery.pl?permit_number=WQ000044.4. October 20, 2002.
- Texas Natural Resource Conservation Commission (TNRCC). Industrial and Municipal (Domestic) Wastewater Permit Applications Query, IMWW Permit History, Alcoa, Inc. Web site: http://www.tnrcc.state.tx.us/cgi-bin/waste/imww/imwwquery.pl?permit_number=WQ000434.8. October 20, 2002.
- Texas Natural Resource Conservation Commission (TNRCC). Industrial and Municipal (Domestic) Wastewater Permit Applications Query, IMWW Permit History, Acme Brick Company. Web site: http://www.tnrcc.state.tx.us/cgi-bin/waste/imww/imwwquery.pl?permit_number=WQ000044.4. October 20, 2002.
- Texas Council on Environmental Quality (TCEQ). No date. Executive Director's Responses to Applicant Alcoa Inc.'s Request for Disclosure to the Executive Director of the Texas

Letter 59 Continued

Commission on Environmental Quality. SOAH Docket No. 582-02-3008, TCEQ Docket No. 2002-0484-IWD, Application of Alcoa, Inc. for TPDES Permit No. 04348. (1 page).

- Reference map and 24 associated photos showing relationship between commentor's property and potential flooding areas (i.e., Chocolate Creek, Big Sandy Creek, and Potato Smith Road low water crossing).
- Federal Emergency Management Agency. 1991. Flood Insurance Rate Map (FIRM), Bastrop County, Texas and Incorporated Areas. Panel 75 of 300, Map Number 48021C0075 C. August 19, 1991.
- Lower Colorado River Authority (LCRA). 2002. LCRA Board Okays Historic Water Agreement with San Antonio. Web site: <http://www.lcra.org/about/news/2001/01/okays.html>. October 15, 2002.
- Hodgkiss, M. 2001. Director, Surface Mining and Reclamation Division, Railroad Commission of Texas. Letter to M. J. Spraggins, Hearings Examiner, Office of General Counsel – Surface Mining Section, Railroad Commission of Texas, regarding Alcoa Inc., Three Oaks Mine Permit Application, Docket No. C1-0004-SC-00-A, Staff Technical Analysis. June 27, 2001.
- Garza, J. 2002. Deputy General Manager, Lower Colorado River Authority. Letter to L. Castanuela, Chief Clerk, Texas Natural Resource Conservation Commission, regarding Alcoa Inc., Texas Pollution Discharge Elimination System (TPDES) Draft Permit No. 04348, TX0124311. June 27, 2002.
- Texas Natural Resource Conservation Commission (TNRCC). 2001. TPDES General Permit No. TXR050000. August 20, 2001.
- Texas Natural Resource Conservation Commission (TNRCC). 2002. Statement of Basic/Technical Summary and Executive Director's Preliminary Decision, Alcoa Inc., Texas Pollution Discharge Elimination System (TPDES) Permit No. 04348 (TX0124311). May 6, 2002.
- Wacławczyk, R. 2002. Plant Environmental Superintendent, Rockdale Operations, Alcoa. Letter to M. Sunderlin, Texas Natural Resource Conservation Commission, regarding Draft TPDES Permit No. 04348, Alcoa Three Oaks Mine. April 3, 2002.
- Excerpts from Industrial Wastewater Permit Application Technical Report for Outfall Numbers: 002 and 003.

Letter 60

Responses to Letter 60



DEPARTMENT OF ART AND ART HISTORY
THE UNIVERSITY OF TEXAS AT AUSTIN

College of Fine Arts • Art Building • 23rd & San Jacinto • Austin, Texas 78712-1104 • Campus Mail Code: D1300
Art FAX (512) 471-7801 • Art History FAX (512) 471-5539 • www.utexas.edu/cofa/aa_ah

October 30, 2002

Ms. Jennifer Walker
EIS Project Manager
US Army Corps of Engineers (USACE)
Fort Worth District
819 Taylor Street
P.O. Box 17300
Fort Worth, Texas 76102-0300

Dear Ms. Walker:

After reviewing the US Army Corps of Engineers Environmental Impact Statement on the Three Oaks lignite coal mine proposed by Alcoa, I have some concerns I would like to have addressed prior to the final report of the EIS.

I am a property owner and resident in Elgin's downtown National Register Historic District. After reviewing the EIS I became alarmed that there was no review of the potential impacts of not only the downtown National Register District, but no review of the potential impacts of any historic property in the city limits or in the county area of the proposed site.

I have several concerns I believe need to be addressed. Those concerns are the impacts on the National Register District, on the historic areas surrounding downtown and on other historic farmsteads/homes in the county. My concerns are increased traffic, noise pollution and air pollution. I ask that these concerns be addressed and any other issues that may have negative impact on the historic resources of our area.

I read the review of the archaeological resources in the EIS, but saw no mention of the historic built fabric and therefore request that a Section 106 review be done on all historic properties in the impact area including but not limited to Elgin's downtown National Register Historic District.

I appreciate your consideration of my concerns.

Sincerely,

Teresa Hubbard
Assistant Professor
Department of Art and Art History
College of Fine Arts, University of Texas at Austin

NOV 01 2002

60

60-1 Please see the responses to general comments T-2 and CR-1 in Sections 4.5.7 and 4.5.11, respectively, of the Final EIS relative to effects to the Elgin National Register Historic District.

60-1

Letter 61

Responses to Letter 61

61



ENVIRONMENTAL PROTECTION AGENCY
Region 6, Dallas, Texas

October 30, 2002

Presley Hatcher
Chief, Permit Section,
Fort Worth District
U.S. Army Corps of Engineers
P.O. Box 17300
Fort Worth, Texas 76102-0300

Dear Mr. Hatcher:

The Environmental Protection Agency (EPA), Region 6, has reviewed Permit Application Number 199900331, and the Mitigation Plan for the Proposed Three Oaks Mine dated June, 2002. The applicant, Alcoa proposes to perform lignite mining in Lee and Bastrop Counties, Texas. The project would impact 5 acres of wetlands, 38 acres of ponds, and about 37 miles of mainly intermittent streams, about 27 miles of which are described as medium or high quality.

We have the following comments and recommendations concerning the mitigation plan:

Only desirable, native species should be planted. Cattails (*Typha*) should not be planted, even in temporary sedimentation ponds where its application might be otherwise appropriate. They will act as a seed source and may spread to areas where it is not desirable. There should be enough desirable native species to vegetate the sedimentation ponds. Planting common reed (*Phragmites*) is questionable. A more desirable substitute would be giant cane (*Arundinaria gigantea*) if it is available. Japanese millet (*Echinochloa crus-galli*) is introduced. There are several native species of *Echinochloa* that should be used instead.

61-1

Other desirable species that should be sought include little bluestem (*Schizachyrium scoparium* var. *frequens*) and big bluestem (*Andropogon gerardii*) for uplands; eastern gamagrass (*Tripsacum dactyloides*) for seasonally flooded areas; and native species of smartweed (*Polygonum*), caric sedges (*Carex*) and flatsedges (*Cyperus*) for the frequently flooded areas. Emory sedge (*Carex emoryi* Dewey) is very good for stream banks and pond edges, if it is native to the area.

Planting and survival of trees and shrubs should be tracked separately. In other words, if 500 native trees and shrubs per acre are planted [p.41, section 11.1] then 50% survival should mean 125 trees per acre and 125 shrubs per acre after 5 years. Woody plants should not be planted in straight rows. Species diversity should be maximized (in terms of species richness and evenness) but hard mast (*Quercus*, *Carya*, *Juglans*) should comprise about 50% of the canopy tree plantings and survival at five years.

61-2

We are pleased that streams will be restored with a floodplain terrace (p.21, section 6.3.2). Channels should be designed to hold a "bank-full" discharge [a flood event with a roughly 1.5 year return interval]. Measurements should be taken on existing channels [channel

61-3

61-1 The use of invasive species such as cattail (*Typha*) and phragmites (*Phragmites*) for interim erosion control is no longer proposed. Further, the species list presented in Table 6-2 of the Mitigation Plan has been revised to incorporate many of the plant species suggested by the commenter (see Appendix E of the Final EIS).

61-2 Section 12 of the Mitigation Plan has been revised to clarify that trees and shrubs would be tracked separately for monitoring purposes (see Appendix E of the Final EIS). The plan has been further revised to clarify the following items: woody plants would be planted in random clusters, hard mast producing species would comprise at least 50 percent of the dominant canopy, the three dominant species of trees and shrubs would be species typically dominant in nature, and no single species would constitute more than 30 percent of the surviving tree/shrub species.

61-3 The Mitigation Plan has been revised to clarify that restored channels would be constructed with low-flow channels sized appropriately to hold the bank-full discharge, typically the 1.5-year flood event (see Appendix E of the Final EIS). The commenter expressed concerns about the reclamation of braided stream channels. It should be noted that most streams would be restored with a single channel. However, a high-quality reach of braided stream channel that currently exists within the project site has been evaluated in detail and would be restored to a similar condition, subject to flow, sediment dynamic, and substrate characteristics.

Letter 61 Continued

dimensions, watershed size, rainfall data, etc.] to aid in the design of new channels which mimic the original streams as closely as possible.

61-3 It is proposed to design the channels "with a sinuosity that is appropriate for specific site conditions." Then it states "The stream design include creating braided low-flow channels..." Which areas would have braided design and which would have single channel design? Are there any braided streams in the area now? If not, attempting to create them will not be consistent with the idea of trying to mimic natural conditions and would probably fail. Braided channels only form under certain conditions. Does the applicant understand what these conditions are? If the braided condition does not maintain itself, the stream should be allow to seek its own equilibrium. We recommend that the stream restoration be done using principles of fluvial geomorphology and that workers trained in this field supervise the restoration.

61-4 We do not understand what is meant by the statement, "Trees and shrubs will also be planted within the base of stream channels...." [p. 41 Section 11.1 Final Reclamation Planting]. Woody plants should not be planted in the low flow channel, but above the bank-full level.

61-5 We are pleased that monitoring will continue for five years. We recommend that monitoring include recording the response of the stream features (including vegetation) to flood and drought events. We are especially interested in the behavior of the channel and performance of the channel features. Monitoring reports should be detailed enough to provide the basis for improving the restoration of later phases of the project. The reports should include ground photos. We request that EPA be sent copies of the monitoring reports annually

Thank you for the opportunity to comment on this project. If you have any questions regarding these comments, please contact Norm Sears of my staff at 214-665-8336.

Sincerely yours,

Norm Sears
Life Scientist
Marine & Wetlands Section (6WQ-EM)

cc: Rollin MacRae, Texas Parks and Wildlife Dept., Austin, TX.

Responses to Letter 61

61-4 Section 11.2 of the Mitigation Plan has been revised to clarify that no woody species would be planted within stream channels (see Appendix E of the Final EIS).

61-5 Sections 18.1 and 18.2 of the Mitigation Plan have been revised to include the collection of photo documentation and collection of field data relative to the response of stream morphology and vegetative characteristics to drought and flooding events (see Appendix E of the Final EIS).

Letter 62

Responses to Letter 62

JW
1999 08 28 1

October 30, 2002

Ms. Jennifer Walker
EIS Project Manager
US Army Corps of Engineers (USACE)
Fort Worth District
819 Taylor Street
P.O. Box 17300
Fort Worth, Texas 76102-0300

Dear Ms. Walker:

After reviewing the US Army Corps of Engineers Environmental Impact Statement on the Three Oaks lignite coal mine proposed by Alcoa, I have some concerns I would like to have addressed prior to the final report of the EIS.

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62-1

I have several concerns I believe need to be addressed. Those concerns are the impacts on the National Register District, on the historic areas surrounding downtown and on other historic farmsteads/homes in the county. My concerns are increased traffic, noise pollution and air pollution. I ask that these concerns be addressed and any other issues that may have negative impact on the historic resources of our area.

I read the review of the archaeological resources in the EIS, but saw no mention of the historic built fabric and therefore request that a Section 106 review be done on all historic properties in the impact area including but not limited to Elgin's downtown National Register Historic District.

I appreciate your consideration of my concerns.

Sincerely,



Molly Alexander
18 N. Main
Elgin, Texas 78621
(512) 281-5865
(512) 736-5865

NOV 01 2002

62

62-1 Please see the responses to general comments T-2 and CR-1 in Sections 4.5.7 and 4.5.11, respectively, of the Final EIS relative to effects to the Elgin National Register Historic District.

Letter 63

Responses to Letter 63

JW
199900331

63

October 30, 2002

Ms. Jennifer Walker
EIS Project Manager
US Army Corps of Engineers (USACE)
Fort Worth District
819 Taylor Street
P.O. Box 17300
Fort Worth, Texas 76102-0300

Dear Ms. Walker:

After reviewing the US Army Corps of Engineers Environmental Impact Statement on the Three Oaks lignite coal mine proposed by Alcoa, I have some concerns I would like to have addressed prior to the final report of the EIS.

I am a property owner and resident of Elgin. After reviewing the EIS I became alarmed that there was no review of the potential impacts of not only the downtown National Register District, but no review of the potential impacts of any historic property in the city limits or in the county area of the proposed site.

63-1

I have several concerns I believe need to be addressed. Those concerns are the impacts on the National Register District, on the historic areas surrounding downtown and on other historic farmsteads/homes in the county. My concerns are increased traffic, noise pollution and air pollution. I ask that these concerns be addressed and any other issues that may have negative impact on the historic resources of our area.

I read the review of the archaeological resources in the EIS, but saw no mention of the historic built fabric and therefore request that a Section 106 review be done on all historic properties in the impact area including but not limited to Elgin's downtown National Register Historic District.

I appreciate your consideration of my concerns.

Sincerely,



Charles Lundgren
1222 Lake Terrace Drive
Elgin, Texas 78621

512-281-2037

63-1

Please see the responses to general comments T-2 and CR-1 in Sections 4.5.7 and 4.5.11, respectively, of the Final EIS relative to effects to the Elgin National Register Historic District.

NOV 04 2002

Letter 64

Responses to Letter 64

199900331
JW

64

October 30, 2002

Ms. Jennifer Walker
EIS Project Manager
US Army Corps of Engineers (USACE)
Fort Worth District
819 Taylor Street
P.O. Box 17300
Fort Worth, Texas 76102-0300

Dear Ms. Walker:

After reviewing the US Army Corps of Engineers Environmental Impact Statement on the Three Oaks lignite coal mine proposed by Alcoa, I have some concerns I would like to have addressed prior to the final report of the EIS.

I am a property owner and resident of Elgin. After reviewing the EIS I became alarmed that there was no review of the potential impacts of not only the downtown National Register District, but no review of the potential impacts of any historic property in the city limits or in the county area of the proposed site.

64-1

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I read the review of the archaeological resources in the EIS, but saw no mention of the historic built fabric and therefore request that a Section 106 review be done on all historic properties in the impact area including but not limited to Elgin's downtown National Register Historic District.

I appreciate your consideration of my concerns.

Sincerely,



Elwanda Lundgren
1222 Lake Terrace Drive
Elgin, Texas 78621

512-281-2037

64-1

Please see the responses to general comments T-2 and CR-1 in Sections 4.5.7 and 4.5.11, respectively, of the Final EIS relative to effects to the Elgin National Register Historic District.

NOV 04 2002

Letter 65

Responses to Letter 65

JW
199900331

65

October 30, 2002

Ms. Jennifer Walker
EIS Project Manager
US Army Corps of Engineers (USACE)
Fort Worth District
819 Taylor Street
P.O. Box 17300
Fort Worth, Texas 76102-0300

Dear Ms. Walker:

After reviewing the US Army Corps of Engineers Environmental Impact Statement on the Three Oaks lignite coal mine proposed by Alcoa, I have some concerns I would like to have addressed prior to the final report of the EIS.

I am a property owner and resident in Elgin's downtown National Register Historic District. After reviewing the EIS I became alarmed that there was no review of the potential impacts of not only the downtown National Register District, but no review of the potential impacts of any historic property in the city limits or in the county area of the proposed site.

65-1

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I read the review of the archaeological resources in the EIS, but saw no mention of the historic built fabric and therefore request that a Section 106 review be done on all historic properties in the impact area including but not limited to Elgin's downtown National Register Historic District.

I appreciate your consideration of my concerns.

Sincerely,

Deanne & Lara Schenk

1136 Sm 3000

Elgin, Tex. 78621

NOV 02 2002

65-1

Please see the responses to general comments T-2 and CR-1 in Sections 4.5.7 and 4.5.11, respectively, of the Final EIS relative to effects to the Elgin National Register Historic District.

Letter 66

Responses to Letter 66

October 30, 2002

Ms. Jennifer Walker
EIS Project Manager
US Army Corps of Engineers (USACE)
Fort Worth District
819 Taylor Street
P.O. Box 17300
Fort Worth, Texas 76102-0300

Dear Ms. Walker:

After reviewing the US Army Corps of Engineers Environmental Impact Statement on the Three Oaks lignite coal mine proposed by Alcoa, I have some concerns I would like to have addressed prior to the final report of the EIS.

I am a property owner and resident in Elgin's downtown National Register Historic District. After reviewing the EIS I became alarmed that there was no review of the potential impacts of not only the downtown National Register District, but no review of the potential impacts of any historic property in the city limits or in the county area of the proposed site.

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I read the review of the archaeological resources in the EIS, but saw no mention of the historic built fabric and therefore request that a Section 106 review be done on all historic properties in the impact area including but not limited to Elgin's downtown National Register Historic District.

I appreciate your consideration of my concerns.

Sincerely,

Kay & Joanna Hicks
1142 5th 2000
Elgin, Tex. 78621

NOV 04 2002

66-1 Please see the responses to general comments T-2 and CR-1 in Sections 4.5.7 and 4.5.11, respectively, of the Final EIS relative to effects to the Elgin National Register Historic District.

Letter 67

Responses to Letter 67

19990033
JW



National Main Street Community

67

October 30, 2002

Ms. Jennifer Walker
EIS Project Manager
US Army Corps of Engineers
Fort Worth District
P.O. Box 17300
Fort Worth, TX 76102-0300

RE: Realignment of State Highway 696

Dear Ms. Walker:

The Elgin Main Street Board has recently become aware of a draft environmental impact statement that was prepared concerning the realignment of State Highway 696. Elgin has a Nationally Register Historical District. We hereby request, pursuant to Section 106 of the National Historic Preservation Act of 1966, a review be completed.

67-1

We request to be listed as an interested party on this issue. Our concern is that a shorter route to Highway 290 will exist when the proposed realignment takes place. This route will possibly funnel additional truck traffic through our downtown historic district as well as a historic neighborhood posing some impact on the National Register District.

Thank you for adding the Elgin Main Street Board to the list of notified parties.

Sincerely,

A handwritten signature in cursive script, appearing to read "Linda Mogonye".
Linda Mogonye, President
Elgin Main Street Board

67-1 Please see the responses to general comments T-2 and CR-1 in Sections 4.5.7 and 4.5.11, respectively, of the Final EIS relative to effects to the Elgin National Register Historic District.

NOV 04 2002

P.O. Box 591 Elgin, Texas 78621 phone 512.285.5721 fax 512.285.5962

Letter 68

Responses to Letter 68

JW
19990033)

68

October 30, 2002

Ms. Jennifer Walker
EIS Project Manager
US Army Corps of Engineers (USACE)
Fort Worth District
819 Taylor Street
P.O. Box 17300
Fort Worth, Texas 76102-0300

Dear Ms. Walker:

After reviewing the US Army Corps of Engineers Environmental Impact Statement on the Three Oaks lignite coal mine proposed by Alcoa, I have some concerns I would like to have addressed prior to the final report of the EIS.

I am a property owner and resident in Elgin's downtown National Register Historic District. After reviewing the EIS I became alarmed that there was no review of the potential impacts of not only the downtown National Register District, but no review of the potential impacts of any historic property in the city limits or in the county area of the proposed site.

68-1

I have several concerns I believe need to be addressed. Those concerns are the impacts on the National Register District, on the historic areas surrounding downtown and on other historic farmsteads/homes in the county. My concerns are increased traffic, noise pollution and air pollution. I ask that these concerns be addressed and any other issues that may have negative impact on the historic resources of our area.

I read the review of the archaeological resources in the EIS, but saw no mention of the historic built fabric and therefore request that a Section 106 review be done on all historic properties in the impact area including but not limited to Elgin's downtown National Register Historic District.

I appreciate your consideration of my concerns.

Sincerely,



Donna Snowden
391 Pleasant Grove Road
Elgin, Texas 78621
(512) 281-9455

68-1 Please see the responses to general comments T-2 and CR-1 in Sections 4.5.7 and 4.5.11, respectively, of the Final EIS relative to effects to the Elgin National Register Historic District.

NOV 04 2002

Letter 69

Responses to Letter 69

199908331
JW

October 30, 2002

Ms. Jennifer Walker
EIS Project Manager
US Army Corps of Engineers (USACE)
Fort Worth District
819 Taylor Street
P.O. Box 17300
Fort Worth, Texas 76102-0300

Dear Ms. Walker:

After reviewing the US Army Corps of Engineers Environmental Impact Statement on the Three Oaks lignite coal mine proposed by Alcoa, I have some concerns I would like to have addressed prior to the final report of the EIS.

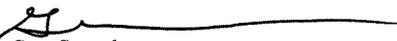
I am a property owner and resident in Elgin's downtown National Register Historic District. After reviewing the EIS I became alarmed that there was no review of the potential impacts of not only the downtown National Register District, but no review of the potential impacts of any historic property in the city limits or in the county area of the proposed site.

69-1 I have several concerns I believe need to be addressed. Those concerns are the impacts on the National Register District, on the historic areas surrounding downtown and on other historic farmsteads/homes in the county. My concerns are increased traffic, noise pollution and air pollution. I ask that these concerns be addressed and any other issues that may have negative impact on the historic resources of our area.

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I appreciate your consideration of my concerns.

Sincerely,


Gary Snowden
391 Pleasant Grove Road
Elgin, Texas 78621
(512) 281-9455

69

69-1 Please see the responses to general comments T-2 and CR-1 in Sections 4.5.7 and 4.5.11, respectively, of the Final EIS relative to effects to the Elgin National Register Historic District.

Letter 70

Responses to Letter 70

144900331
JW

70

October 30, 2002

Ms. Jennifer Walker
EIS Project Manager
US Army Corps of Engineers (USACE)
Fort Worth District
819 Taylor Street
P.O. Box 17300
Fort Worth, Texas 76102-0300

Dear Ms. Walker:

After reviewing the US Army Corps of Engineers Environmental Impact Statement on the Three Oaks lignite coal mine proposed by Alcoa, I have some concerns I would like to have addressed prior to the final report of the EIS.

I am a property owner and resident in Elgin's downtown National Register Historic District. After reviewing the EIS I became alarmed that there was no review of the potential impacts of not only the downtown National Register District, but no review of the potential impacts of any historic property in the city limits or in the county area of the proposed site.

70-1 Please see the responses to general comments T-2 and CR-1 in Sections 4.5.7 and 4.5.11, respectively, of the Final EIS relative to effects to the Elgin National Register Historic District.

70-1

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I read the review of the archaeological resources in the EIS, but saw no mention of the historic built fabric and therefore request that a Section 106 review be done on all historic properties in the impact area including but not limited to Elgin's downtown National Register Historic District.

I appreciate your consideration of my concerns.

Sincerely,

Erin & Raychelle Schaudies

*We have a house built in 1906. It is a block from the connecting road 3000.
As this is our dream house, we plan to live here the rest of our lives. We have serious concerns about the detrimental impact of this Alcoa project!
Thank you!*

NOV 04 2002

Letter 71

Responses to Letter 71

11/11/02
SW

**Jeanette
Shelby**
REALTORS®
November 1, 2002

Ms. Jennifer Walker
EIS Project Manager
US Army Corps of Engineers (USACE)
Fort Worth District
819 Taylor Street
P.O. Box 17300
Fort Worth, TX 76102-0300

Dear Ms. Walker:

After reviewing the US Army Corps of Engineers Environmental Impact Statement on the Three Oaks lignite coal mine proposed by Alcoa, I have some concerns I would like to have addressed prior to the final report of the EIS.

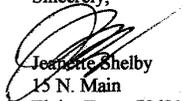
I am a commercial tenant in Elgin's downtown National Register Historic District. After reviewing the EIS I became alarmed that there was no review of the potential impacts of not only the downtown National Register District, but no review of the potential impacts of any historic property in the city limits or in the county area of the proposed site.

I have several concerns I believe need to be addressed. Those concerns are the impacts on the National Register District, on the historic areas surrounding downtown and on other historic farmsteads/homes in the county. My concerns are: increased traffic, noise pollution and air pollution. I ask that these concerns be addressed and any other issues that may have negative impact on the historic resources of our area.

I read the review of the archaeological resources in the EIS, but saw no mention of the historic built fabric and therefore request that a Section 106 review be done on all historic properties in the impact area including but not limited to Elgin's downtown National Register Historic District.

I appreciate your consideration of my concerns.

Sincerely,


Jeanette Shelby
15 N. Main
Elgin, Texas 78621
(512) 281-3412



101 W. 1st. Street, Suite D • Elgin, Texas 78621
(512) 285-5289 • (512) 281-3412 • 1-800-231-5289 • Fax (512) 281-9608

NOV 02 2002

71

71-1 Please see the responses to general comments T-2 and CR-1 in Sections 4.5.7 and 4.5.11, respectively, of the Final EIS relative to effects to the Elgin National Register Historic District.

71-1

Letter 72

JW
199900331

72



Silicon Hills
Documentation Services

November 1, 2002

Ms. Jennifer Walker
EIS Project Manager
US Army Corps of Engineers (USACE)
Fort Worth District
819 Taylor Street
PO Box 17300
Fort Worth, Texas 76102-0300

Dear Ms. Walker:

I am writing to you as a concerned citizen of Bastrop County, Texas. I lease a downtown Historical building in Elgin, Texas for my business, Silicon Hills Documentation Services. It has come to my attention that the recent Environmental Impact Statement for the Three Oaks Mine, located in Bastrop and Lee Counties, did not address the impact of the strip mining activities on historical properties in the Elgin area.

72-1

According to the most recent figures, downtown Elgin, Texas is 4 miles as the crow flies from the beginning of the mining activities. In this area of the state, the prevailing breezes are from the east and southeastly directions – which would bring the pollutants directly into downtown Elgin. I thought any property within a 5 mile distance from the mine would be affected and thus included in the environmental study, but apparently not so.

I wish to loudly express my concern for the negative impacts on Elgin's downtown National Register Historic District as well as historic homes and businesses. Reports indicate a tremendous increase in traffic, noise, and pollution. Please place the present study on hold until such time as the downtown area in Elgin, Texas, which has many National Register Historic buildings, has been studied, measured, tested, and evaluated according to the strictest environmental criteria. I request that this area be studied for noise pollution, traffic pollution, and air-borne carcinogens and pollutants. I would also appreciate the area being studied for pollution harmful to humans and domestic animals.

72-2

Would you please send me the criteria for air quality testing, i.e., frequency of testing, licensing of testing companies; "approved" pollution levels (isn't that ludicrous?)? I would appreciate your response to these questions. I would also request that the environmental

72-3

evaluation of the Elgin Historical buildings and Elgin residential area be conducted as soon as possible.

Sincerely,

Jeri Witta

NOV 04 2002

Responses to Letter 72

72-1

Please see the responses to general comments T-2 and CR-1 in Sections 4.5.7 and 4.5.11, respectively, of the Final EIS relative to effects to the Elgin National Register Historic District.

72-2

Please see the text in Section 3.8.1.3 of the Draft EIS for a discussion of National Ambient Air Quality Standards for applicability to human health and Section 3.8.2 of the Draft EIS for a discussion of potential air quality impacts.

For mines and coal transfer operations, there are no automatic requirements for air quality testing. The criteria for air quality testing is determined by the TCEQ for coal transfer equipment. The RRC determines air quality testing for mine operations. These criteria are determined on a case-by-case basis by the appropriate agency during the permit approval process and at other times as determined by the agency. The frequency of testing also is determined on a case-by-case basis by the appropriate agency.

There is no formal licensing of air quality testing companies. All testing is performed to standard methods. For example, testing of PM₁₀ point sources must be performed using the USEPA's Method 5 Determination of Particulate Matter Emissions from "stationary sources," 40 CFR 60 Appendix A-3. A testing company then certifies that an emissions test complies with the appropriate test method.

72-3

Please see the responses to general comments T-2 and CR-1 in Sections 4.5.7 and 4.5.11, respectively, of the Final EIS relative to effects to the Elgin National Register Historic District.

Letter 73

14440053
JW

119 FM 696
Elgin, Texas 78621

73

November 2, 2002

Ms. Jennifer Walker
Regulatory Branch
CESWF-PER-R
U.S. Army Corps of Engineers
P.O. Box 17300
Fort Worth, Texas 76102-0300

Dear Ms. Walker,

Subject: Public Comments DEIS- Three Oaks

Please find enclosed our comments in written format for the DEIS of the Three Oaks Mine Project. We will try to send electronically on Monday as well. A softcopy is also enclosed on CD-Rom with hyperlinks in the Table of Contents and in cross-references(in blue) throughout that allow for easier navigation back and forth in the document. If the softcopy opens up asking for a password just click on open as read-only. A confirmation email upon receipt to dan_hicks@earthlink.net would be appreciated.

Regards,

Dan and Sandra Hicks
Enclosure (1)36pages

DRH

Letter 73 Continued

Comments to Three Oaks Mine Draft Environmental Impact Statement

**Submitted by Landowners on Big Sandy,
Daniel and Sandra Hicks
119 FM 696
Elgin Texas 78621**

NOV 04 2002

NOV 04 2002

Letter 73 Continued

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Comments To Draft EIS
Dan and Sandra Hicks
11/1/2002

Letter 73 Continued

INTRODUCTION

73-1 My wife and I live on approximately 105 acres located approximately 5 miles east of Elgin near McDade and directly south of the proposed mine disturbance area. Our home is not shown on Attachment #1 -Existing Occupied Residences not owned or Controlled by Alcoa or CPS. We have included it with the location of our home and approximate property boundaries marked. We currently have party status with TNRCC on the other water related permit application. Our Eastern boundary is an unclassified segment of the Big Sandy just below the mine site, which receives combined discharge from Outfall #2 and Outfall #3. The northern part of this creek boundary begins with a large impoundment not mentioned in the report and extends to the bridge at Highway 290 where the LBS (Lower Big Sandy) Monitoring Station is located on the other side of HWY 290. An earthen dam exists about the middle of this boundary creating the large impoundment. Its level is controlled with a draw down pipe to an exit culvert below, much as the sedimentation ponds ALCOA has planned will do (as explained to me by their engineering consultants).

WATER QUALITY

73-2 In the Summary Section of the draft EIS under **Waters of the US Including Wetlands** it is stated that "the short term loss of waters of the US would result in a temporary functional loss of their value, specifically runoff and sediment retention, **affecting downstream water quality**". Further in a secondary paragraph it states "any changes that occur would be substantially attenuated by the **first downstream impoundment or tributary on each channel**". Since our property represents the first major downstream impoundment it is our property and water source that it appears ALCOA s relying on to collect any problems and protect others downstream. Reference the aerial photo in Figure 1 - Aerial Photo of Property and Creek, Downloaded from Terraserver.com, labeled in MS Word below to get a better understanding of our creek's situation. We keep hoping that some government agency chartered with protecting the public will stand up for the lonely rights of private landowners who lie in the path along these creeks and keep these plans from becoming a reality that will degrade the quality of water for our livestock, take away the habitat for one of the most diverse groups of raptor, waterfowl and animal populations which we have had the privilege to live around. It is this habitat that brings the most value to our property and our daily lives. Destruction of this habitat as could occur with excessive flooding caused by sedimentation pond failure, or loss of sustainable water flow through excessive pumping would be devastating to us obviously in an economic sense but it is the enrichment that this habitat brings to our daily lives that would be missed most of all and on which we place a higher value. We would not get the same benefit by driving all the way to another county to see the mitigated site, nor would the scores of waterfowl that come to the creek each winter recognize the signs Alcoa might erect showing them the way to an alternative location.

Comments To Draft EIS
Dan and Sandra Hicks
11/1/2002

Responses to Letter 73

73-1 Comment noted.

73-2 Modifications to the Summary section for Waters of the U.S., Including Wetlands, have been made in response to this comment (see page vi of the Final EIS). Minor and temporary water quality effects from sediment are anticipated; these impacts may occur during the initial construction period. However, Alcoa would use best management practices during the construction phase to minimize such impacts. During the life-of-mine and afterward, proposed control practices and additional recommended monitoring and mitigation measures would minimize potential impacts. Under these measures, sediment and storm water runoff controls would be established, and water quality monitoring and treatment would be implemented, as necessary. Also, see the expanded discussion beginning on page 3.2-71a of the Final EIS relative to potential downstream flooding impacts.

It is not Alcoa's intent, nor is it allowed under agency regulations, to use floodplain structures or features owned by other private property owners for mitigation purposes. The point of the statement is that existing features and watershed conditions already control sediment transport in nearby drainages, and these factors would continue to dominate.

Letter 73 Continued

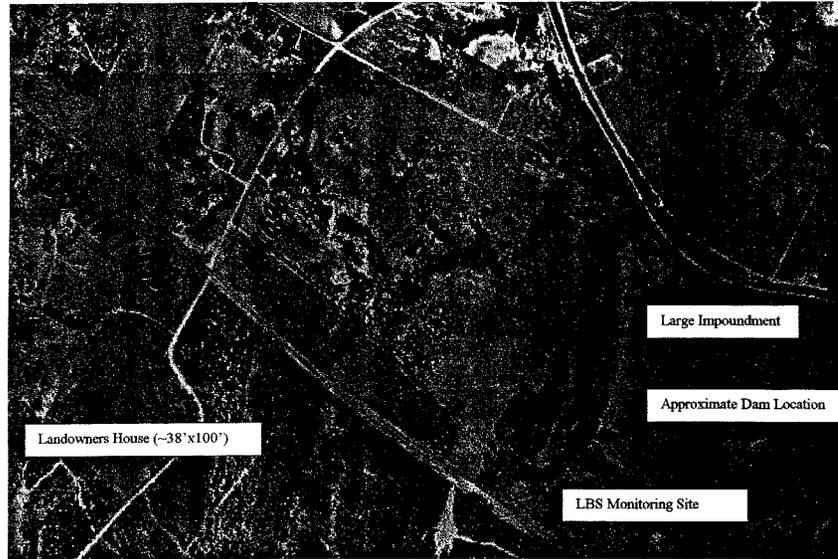


Figure 1 - Aerial Photo of Property and Creek, Downloaded from Terraserver.com, labeled in MS Word

FISH, WILDLIFE, AND WETLANDS

73-3

In looking at the draft EIS I have personal knowledge that an important error occurs in Section 3.5-11 under Alcoa's cursory dismissal of Bald Eagle possibilities at the mine site. When my wife and me moved into the house where we currently reside 5 years ago in December there was a pair of nesting Bald eagles in a Cedar tree approximately 75-80 yards behind the house. It was a rare pleasure that most don't get to see that close up, hearing their screams every morning, watching them raise their young, and defend their nesting territory from any other birds flying by. That pair and their offspring have returned every year. The most recent couple of years though they moved their nests to the other side of HWY 290 on Camp Swift near the Big Sandy. As for no large bodies of water the Big Sandy is large enough to present good habitat in this area see Figure 6 - Large impoundment North of Dam on Big Sandy showing the breadth of the creek created by this large impoundment to realize this. It represents around 5 1/2 acres in surface area. Under the Bald eagle protection act these birds should be protected. Under Fish and Wildlife Management Guidelines for Southern Bald Eagles, provided as Attachment # 2 - Federally Listed Endangered and Threatened Species it states that "Habitat alteration or change in land use, such as would result from residential, commercial, or industrial development; construction projects; mining operations should

Comments To Draft EIS
Dan and Sandra Hicks
11/1/2002

Responses to Letter 73

73-3

Comment noted. The potential bald eagle nest site at Camp Swift is outside of the proposed mine area and would not be affected by mine development or operation.

Letter 73 Continued

73-3 be avoided.” These creatures are sensitive to Habitat change. They should be returning soon and I will try to make every effort possible to document them this year. I will enlist help to see if any historical nest locations can be documented as well. In addition to the Bald Eagles we see many Crested Caracara’s (Mexican Eagle), Banded Hawks, Blue Herons, every conceivable type of waterfowl, and many migratory songbirds including Painted Buntings and Bluebirds.

73-4 In the summary sections of the Draft EIS it specifically says that in the Upper reaches of the Big Sandy “the draw-down of the aquifer would reduce the amount and extent of surface water and associated riparian and wetland habitats of springs, seeps, and intermittent stream reaches... Potential reduction of loss of available water could effect wildlife resources as a result of 1) decrease in available water for consumption. 2.) Loss of breeding, foraging, and cover habitat; 3.) Reduction in regional carrying capacity, and 4) and displacement and loss of animals.” The diversity of the Bird population that comes thru here is incredible and to upset their habitat would destroy the ecosystem in this area, as we know it.

Additionally the wood canopied Impoundment makes a perfect shelter for Waterfowl and is literally covered with them at times in the winter. In Figure 2 -Wood Ducks on Creek, Oct 15th 2002 it shows some Wood Ducks, I observed just last month. Teals will begin passing thru soon.

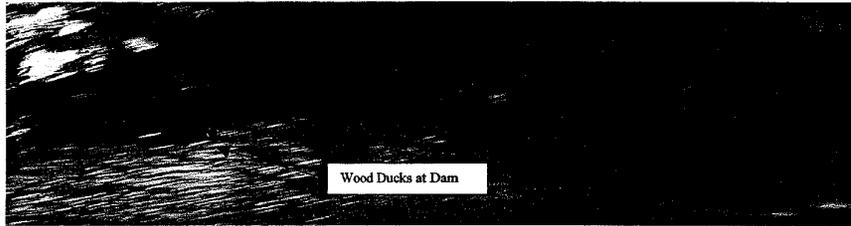


Figure 2 -Wood Ducks on Creek, Oct 15th 2002

73-5 The extent of the quality of the upper reaches of Big Sandy and the surrounding woodland is not fairly represented. Nothing like it could be created in an alternative mitigation site. Examples of Old Growth Timber found on my property are shown in Figure 3 -Old Growth Timber on Big Sandy Bottom, circumference, and in Figure 5 -Old Growth Pecan – 152 inch circumference. One of the Pecans measuring in at 213-inch circumference is just 12 inches shy of being recorded as the largest one in Bastrop County. Trees such as these I am told cannot collect enough rainfall to sustain themselves and grow. They must have a shallow groundwater source available to supply the large amount necessary. The groundwater drawdowns planned will kill these specimens, a large economic and aesthetic loss. The riparian Woodland and Wetlands of

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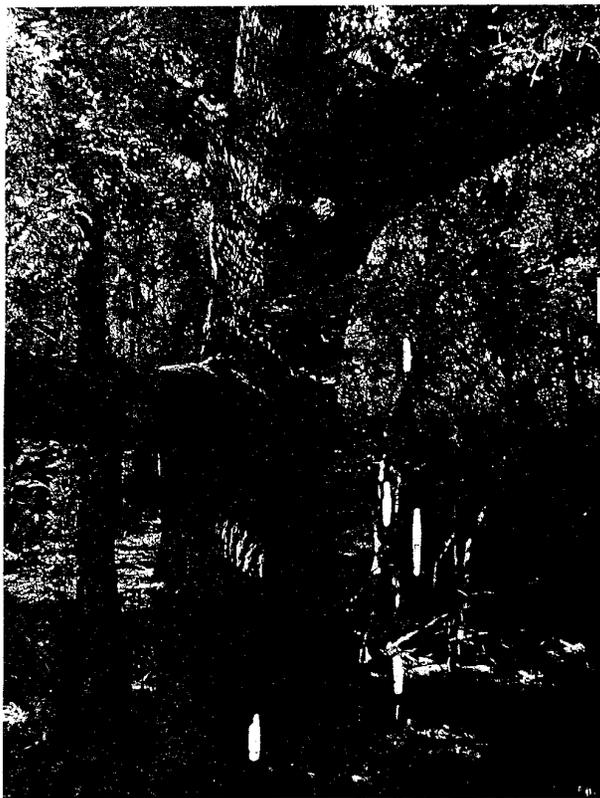
Responses to Letter 73

73-4 Comment noted.

73-5 As stated in Section 3.4.2.1 of the Draft EIS, oak, pine, and other large tree species have shallow root systems that predominately rely on soil moisture from precipitation. Since these species generally are unable to access groundwater at depths greater than approximately 10 to 20 feet, it is unlikely that the trees would be affected. This assessment of impacts to tree species also would apply to pecans.

Letter 73 Continued

73-5 | this creek are highly developed and should be reflected in the effected totals, not just listed as an unclassified segment of Big Sandy. Additionally the importance of the naturally occurring wetlands should be protected, not mitigated with another site that is already partially developed.



This tree has a circumference of 112 inches

Figure 3 -Old Growth Timber on Big Sandy Bottom

Letter 73 Continued



Pecan Tree – Circumference –
213 inches - My son is 5'10
standing next to it. Largest on
record in Texas is 237 inches in
circumference

Figure 4 -Old Growth Pecan – 213 inch circumference

Letter 73 Continued



Pecan tree – 152 inch circumference

Figure 5 -Old Growth Pecan – 152 inch circumference

MONITORING and WATER QUALITY MEASUREMENTS

In reviewing the current draft specification I believe the stream monitoring location as well as the water quality sampling are not an accurate representation of the baseline for this tributary and the entire basin, which feeds it. Alcoa states in Section 3.2-66 that it has developed a surface water control plan and monitoring plan for the project. Pieces of the plan are probably spread thru the document but it would have been good for that to be included in this report as an attachment. Its omission is a major hindrance in the public process. Without it the Public has no insight as to the extent of their plan or the accuracy of their Monitoring methods or the consistency of the methods between locations. These should be open to scrutiny by the public. We ask that these be made available in the final draft and additional time given for Public review of these important pieces of missing

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73-6 The existing monitoring program is discussed in Section 3.2.4.1 and in Appendix C, Tables C-9 through C-14 (see the Draft EIS for Tables C-13 and C-14; see pages C-14 through C-20 of the Final EIS for Tables C-9 through C-12). Additional monitoring information has been included in Table C-12 of the Final EIS for the longer period of inventory since the Draft EIS was published. Please also see the response to general comment SW-1 regarding a summary of the proposed surface water monitoring program. The monitoring procedures employed in the program are based on standard industry practices. The program provides adequate data for baseline characterization and impact assessment. Additional text has been added to page 3.2-83a of the Final EIS to describe the proposed surface water monitoring program for the proposed project.

Monitoring stations were located where access and channel conditions were the most suitable for gaging and collection of water quality samples. Access considerations include landowner permission for construction and repeated visits to the site. An advantage of the LBS site is that it is located where the USGS located their gaging station, which operated in the late 1970s and early 1980s. Flow and water quality data were collected there by the agency at the time, and the selection of this site allows a continuing record of flows and water quality.

The baseline inventory includes several long-term gaging sites located upstream of LBS as well. Overall, the inventory sites are located appropriately with regard to the stream network, and they sample small tributaries as well as larger streams.

Alcoa would be monitoring and reporting its mine releases at or above the outfalls proposed in the TPDES permit application, in accordance with TCEQ regulations and the RRC monitoring program. These points are upstream of the pond feature in question, and are where compliance requirements would have to be met. If continued water quality exceedences were reported, TCEQ and USEPA would be required to enact enforcement measures. Sediment ponds and other surface water control features are planned and designed for the proposed mine area according to applicable regulations as described on page 2-27 of the Final EIS. These facilities would trap sediment above the impoundment on Big Sandy Creek. Based on these factors, negligible water quality impacts to the on-channel pond are anticipated. Additional text has been added to page 3.2-83a of the Final EIS describing the proposed monitoring plan.

Letter 73 Continued

Responses to Letter 73

73-6 information. We find it hard to believe that a lot of field work was done to ensure that proper monitoring locations and procedures were established when looking at the location of LBS monitoring station relative to the Hydrology of the creek just upstream. This probably applies at other locations as well. Please refer to photos in Figure 6 -Large impoundment North of Dam on Big Sandy thru Figure 10 -Below Dam on Lower Big Sandy – Main Channel, Just North of LBS monitoring point for a better understanding of the descriptions that follow. The earthen dam feature, which creates the large impoundment just north of the monitoring site acts much as the proposed sedimentation ponds planned by the mine. Any effluents released from the mining area will be trapped in this impoundment. This acts as protection barrier to the remainder of the stream and the LBS monitoring point. Just prior to this dam is the location where water quality baseline and future measurements should occur. The flow rates and assessment as to whether this stream is intermittent or no-flow at times is definitely influenced by this segment of the creek. In addition to the dam there are multiple paths through a very densely vegetated area to combine again at various locations in the creek above the monitoring site. The flow rate out of the dam is steady and slow most of the time, but during moderate rain events the creek spills over to the west just above the dam and during significant rain events it will even spill over the dam. During these times the water is usually very forceful and fills the creek with great force. It is these periods that have defined the topography of the creek below the dam. It has much more erosion and sharper banks with depressions and pools along the way. It has been observed that in particular in this region of the creek by the landowner that below the dam and prior to the LBS point there is a large circular hole in the creek that always appears to have plenty of water and appears to be a spring. It is possible that this is a spring that in low-flow conditions during droughts recedes giving greater holding capacity for the flow coming from upstream over time. This could account for a false no flow condition at LBS point even when flow has not ceased. During the summer of 1999 we did see a period where portions of the large impoundment dried up. It was as if flow to the creek were completely shut off. Many large fish (Bass, Gar, Carp) and aquatic life in the creek died. Enough pockets of water remained to allow it to reestablish once flow returned. No one in the area who I questioned had ever seen it do that, and similar rainfall patterns have occurred that did not produce the same effects. Others and we speculate that the brickyards or someone upstream had built another containment facility that was filling during this low-flow period and robbing our portion of the creek of its normal input. If this is the effect due to groundwater drawdown under several of Alcoa's scenarios it will be devastating to the fish and creek ecology once again. The point to be made here though is that it appears an extraordinary event was occurring which would have gave non typical data to ALCOA during the beginning of their data collection period. Without accurate data it is impossible to gauge whether the mines plan is sufficient to control water quality, water levels, and surface ecology in the area that would be affected. The Camp Swift data that is available is much too old to be used as an accurate representation of the present. We seek that this permit be denied at this time and a comprehensive monitoring plan be filed that will produce more accurate data with which to design a protective plan for the community in this area. Sound engineering is only derived from good data to draw from and the data used to compose this plan is likely insufficient.

73-7

73-7 Please see the response to comment 73-6. The monitoring program currently covers over 3 years of data collection and represents both drought years and high-flow years on major streams and smaller tributaries. In addition, the EIS assessment reviewed gaging and water quality data from USGS sites in the region and from monitoring at the Sandow Mine. Such data provide a background context for assessing impacts and for evaluating the proposed mine's monitoring program. The drainage and water quality control plans for the proposed mine are based primarily on regulatory requirements and standard design practices and require review and approval by RRC and TCEQ.

Letter 73 Continued



Figure 6 -Large impoundment North of Dam on Big Sandy



Figure 7 -Standing on Dam, Looking North on Big Sandy

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Letter 73 Continued



Figure 8 -Water Flowing Out of Back Side of Dam

Letter 73 Continued



Figure 9 - Flow from back of Dam to Lower Big Sandy – Not main channel

Letter 73 Continued



Figure 10 -Below Dam on Lower Big Sandy – Main Channel, Just North of LBS monitoring point

SEDIMENTATION POND DESIGN

The current sedimentation ponds for outfalls #2 and #3 were designed for a 10 year 24 hour storm event. This is the bare minimum as required by law. The office of Surface mining has tried to get the laws changed to be 25 year 24 hour as a minimum for many years. This is a result of many failures that have occurred over the years causing excessive erosion, sedimentation increases and the release of mine effluents downstream before pit water is properly treated. In Attachment #3 - **DEP Years Behind on Mine Runoff Rules**, The Department of Environmental Protection has been taken to court by the conservancy on behalf of people who have been affected by this insufficient law in an effort to change it. That case is pending in North Carolina and hopefully will affect the pond requirements of this mine. Late decisions in this case should not allow the same types of grandfather provisions afforded to their Rockdale mine, which would not pass today's standards. Other states have already issued local laws to promote better Soil conservation and require a 25 year 24 hour rule as shown in Attachment #4 – The Pennsylvania Code 273.243 Sedimentation Ponds.

A good steward would design this into any plan today, as the insufficiency has existed and been well documented for some time. No time is spent explaining the effects,

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73-8 The proposed sediment pond designs (including spillways) are in compliance with current federal and state regulations. Additional text has been added to page 2-27 of the Final EIS for clarification. TCEQ has added modification 3 to the draft TPDES permit that will require all wastewater treatment facilities to be designed or located to be protected against the 100-year frequency flood level. Alcoa will modify facility designs accordingly.

Letter 73 Continued

73-9 temporary or permanent of such pond failures. Due to the pond impoundment design on our creek we are concerned that effluents released will collect in our portion of the creek and continually contaminate the area. Since water quality is not being tested at this location and the dam protects the LBS monitoring point, and Upper Big Sandy would not detect it since it would pass downstream to our collection point. Other features in our pond and along our creek, which make it more likely to capture and maintain effluents in sediment over time, are that 100's of thousands (no exaggeration) if not millions of bricks were placed in the base of this tributary in the early years of the brickyards to help control erosion from runoff. These bricks have provided a good base for sediment to collect and plants to attach.

73-10 As a direct recipient of anything Alcoa does upstream I would like to see a much more active approach to the management of water out of their ponds. I am especially concerned with low-flow conditions and the effect that excessive pumping or containment without release might have on our portion of the creek. Alcoa should be required to operate its ponds so that, during low flow periods they do not dry up the creek. In fact, they should be required to operate the ponds to mimic natural drainage such as releasing water when runoff flows in _ i.e. during a rain, and the water should be as good in quality.

HAZARDOUS MATERIALS

73-11 Only herbicides and insecticides are listed as chemicals to be used and primarily in reclamation, much as other agricultural uses of similar chemicals in the area. Nothing is mentioned of biocides, which might be used in the clearing of the more than 8000 acres to be mined. If chemical means of de-vegetating the land to be mined is to be used the chemicals should be spelled out as well as their potential impact to the groundwater supply. Biocides are used much less frequently in agricultural activities in the area and the use on such a large area would represent a significant increase in chemicals being used. Also many mines use flocculants in the stabilization of mud in the pits. In other areas of the country this practice has been used and the chemical was traced to local well waters. They are hazardous to human and animal health. No mention of whether chemicals will be used in these manners is mentioned. The final draft should indicate whether this would be a technique in the Three Oaks Pit.

73-12 Additionally disposal of coal combustion waste in the pit could release harmful minerals and toxins such as arsenic into the groundwater as indicated in Attachment #5 – CCW rules protect utility profits, not groundwater. Currently we place requirements on landfills to have clay liners to prevent leaching of harmful waste into our groundwater. Why should we have any less of a standard for the mine? It would be far better to ensure for proper disposal at a proper waste disposal site that has long term monitoring to ensure adequate protection.

Responses to Letter 73

73-9 Please see the response to comment 73-6.

73-10 During the initial years of the proposed mine, Alcoa would be discharging depressurization water to the Chocolate Creek/Big Sandy Creek system. As discussed in the Draft EIS, these flows largely would compensate for groundwater drawdown effects on stream baseflows. During storm runoff events, the peak flows would be slightly modified, and volumes would be somewhat decreased. On Big Sandy Creek, these parameters generally would remain within 3 to 5 percent of the pre-mining conditions. Storm releases typically would occur up to a week or so after large events; therefore, the timing of storm flows would not be significantly altered from the natural condition. If and when the SAWS contract is implemented and depressurization discharges cease, flow contributions from upstream watershed areas would still be sufficient to maintain perennial pools that may occur along Big Sandy Creek or Middle Yegua Creek, as described in Section 3.2.3.2 of the Draft EIS. Water quality issues are addressed in the EIS and in the responses to other comments.

73-11 Alcoa plans to use mechanical means to remove vegetation from areas to be mined shortly before overburden removal. There are no plans to use biocides for this purpose. Flocculants, which are not classified as hazardous materials, may be used, if necessary, in the management of settling ponds for treatment of water prior to discharge.

73-12 Please see the responses to general comments PA-1 and PA-2 in Section 4.5.3 of the Final EIS regarding bottom ash.

Letter 73 Continued

PUBLIC PROCESS COMMENTS

73-13

The process that has been set up for ALCOA to obtain all necessary permits seems extremely unfair and non-inclusive of the public. The entire affair is orchestrated to limit the participation of those affected and someone should challenge this process. As an effected party status holder in the TNRCC permit request, vital information in this EPA draft document was withheld until the last possible minute. Alcoa had access to it and provided input for months prior to release. Interrogatories and Requests for Documents had to be filed in the TNRCC case with very little time for a review of a 1000 plus page document. A document that ALCOA was able to provide all the information for and slant in its favor. Most of the other party participants are from an economically poor region and do not have the funds to secure legal representation for fair treatment. The state provides some guidance thru TNRCC but is completely insufficient to stand up to the legal requests of Alcoa attorneys or to provide the specialized knowledge necessary to mount a strategic defense of their interests. I did not file for party status in the railroad commission permit because the TNRCC application was made public after the deadline. Since we live outside the mine boundaries it was not clear to me until the water permit requests that I would be an effected party. It is apparent that ALCOA in the 25+years since they were dealt the Clean Air and Water Acts has since learned how to use political means to circumvent what was originally meant to protect the public. In a telephone conversation with Lee Dildy, County Commissioner for my district I asked about his position and the issues regarding the movement of roads for the mine. One statement made was that the Corps had already indicated to him that if the Commissioners did not approve the road moving request mining would still take place and that the commissioners would be responsible for creating a more hazardous environment for operations. This presumes approval of the Corps permit before the Public process has even drawn to a close. This simply illustrates that it is viewed as a nuisance to the process and as long as the "I's" are dotted and "T's" crossed the permit will be issued. I consider myself a conservative Republican, not an extreme environmentalist and would never be drawn into such a public debate if I did not feel this permit would directly affect us. Unfortunately in terms of environmental policy and protection my party appears to have let me down. Through political lobbying and unfair rule writing by major polluters processes are now in place that make permit applications quicker and less comprehensive in their investigation, rules the granting boards must follow are not in the public favor, appointees are more responsive to the large corporations with the political dollars to spend, and enforcement is weaker. Alcoa, which has been found guilty of monopolization in business, ¹U.S. v. Aluminum Co. of America (ALCOA), 148 F.2d 416 (2d Cir. 1945), has now found the means to monopolize the public's say in resources vital to their future. Please reference Attachment # 6 – Robbing Peter to Pay Paul, Did Alcoa Bush-whack environmental concerns in Texas, Pittsburgh City Paper, as I believe it gives a fair representation of what appears to have happened in Texas.

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73-13 Please see the response to general comment NEPA-4 in Section 4.5.1 of the Final EIS.

Letter 73 Continued

ECONOMIC RISKS

73-14

Other factors which should be considered related to the economic risk of the project are the financial ability of the permit holder to be in a position to always perform the reclamation work necessary to restore the land to its best possible state. No mention is made and perhaps a requirement of other permits, the permit holder should be required to establish bonds sufficient to clean-up their mess should they default. I am sure that ALCOA can point to a long and successful history of mining. The current economic times cannot be ignored or the risk they pose to future completion of their reclamation plans. Many Economists project that with the recent collapse of the NASDAQ and now the beginnings of the DOW, a deflationary period for the US Dollar will occur much as has occurred for the Japanese Yen after the collapse of the NIKKEI. Along with the deflationary effects to the dollar, commodity prices for raw materials will fall also. This will be devastating to a company such as ALCOA. Already this year commodity prices have fallen some 30-40% off their highs. In a recent quarter Alcoa's net income fell 24% and long term corporate debt increased by close to \$1 Billion dollars as referenced by **Attachment #7 – Unclear At Alcoa**, by Bob Davies. At this cash burn rate and debt accumulation level Alcoa will be in trouble in the early years of operation at Three Oaks. Additionally the books of ALCOA might not even serve as a reliable reference as to their capabilities or true debt picture. They currently use the same financial advisors and attorneys, **Vinson and Elkins**, as another Texas Catastrophe ENRON. Reference **Attachment #8 - Vinson & Elkins "Boasts" Of Work It Did for Enron** where there expertise in off balance sheet financing is defended. This is a practice that makes it extremely difficult to evaluate the true liquidity of a company, as seen in many recent large company collapses. Additionally the books are certified by Price, Waterhouse, Coopers the same accounting firm that has overlooked the books of other recent corporate fraud acts of **TYCO** and **Bank of Credit and Commerce International (BCCI)**. Reference **Attachment #9 - PricewaterhouseCoopers caught in Tyco spotlight** and **Attachment #10 – Accountants in BCCI net for an elaboration of the bad accounting jobs done by Price Waterhouse in these instances.**

Responses to Letter 73

73-14

As stated on page 2-49 of the Draft EIS, RRC regulations require that Alcoa post a reclamation bond equal to the estimated reclamation costs at permit term intervals throughout the life of the mine and for the final closure site conditions. Bonding provisions ensure that reclamation of mine-related disturbances occurs in accordance with the approved reclamation plan regardless of Alcoa's financial ability to do so at the appropriate time.

Letter 73 Continued

Responses to Letter 73

SUMMARY

73-15 In the U. S. Army Corps of Engineers Regulatory Overview Guide dated December 1997 it states;
Of great importance to the project evaluation is the Corps public interest review. The public and private benefits and detriments of all factors relevant to each case are carefully evaluated and balanced. Relevant factors may include conservation, economics, aesthetics, wetlands, cultural resources, navigation, fish and wildlife values, water supply, water quality, and any other factors judged important to the needs and welfare of the people.

In making my case for the inadequacies in this report it cannot be denied that when a preponderance of these factors have been evaluated they lead to an imperfect balance for the public and their welfare.

73-16 The purpose of the National Environmental Policy Act is to require agencies to consider environmentally significant aspects of proposed actions, and in so doing, to let the public know that the agencies' decision making processes include environmental concerns, *Baltimore Gas & Elec. Co. v. Natural Resources Defense Council*, 462 U.S. 87,97 (1983).

For projects such as the Three Oaks Mine, federal permitting approvals must be preceded by an Environmental Impact Statement ("EIS"). The consideration of alternatives to the project as defined by its proponents is the heart of the EIS, itself. 40 CFR § 1502.14. Under Corps of Engineers regulations, a Clean Water Act § 404 permit to discharge fill material into jurisdictional waters may not be issued, if:

73-17 (i) *There is a practicable alternative to the proposed discharge that would have less adverse effect on the aquatic ecosystem, so long as such alternative does not have other significant adverse environmental consequences; or*
(ii) *The proposed discharge will result in significant degradation of the aquatic ecosystem under § 230.10(b) or (c); or*
(iii) *The proposed discharge does not include all appropriate and practicable measures to minimize potential harm to the aquatic ecosystem; or*
(iv) *There does not exist sufficient information to make a reasonable judgment as to whether the proposed discharge will comply with these Guidelines.*

40 CFR § 230.12(a)(3). The alternatives considered in the draft EIS fail to include alternatives that allow the mine to be developed, but that honor the requirements of (i) and (in) above. This is a fatal shortcoming of the DEIS.

73-15 Throughout the EIS process, the USACE has solicited and considered public and agency input relative to all of the relevant factors listed by the commenter. These and other factors as prescribed in applicable regulations and guidelines will be evaluated in the USACE's decisions related to this permit application.

73-16 Comment noted.

73-17 Alternatives to the project are discussed in Sections 2.2, 2.3, and 2.4 of the Draft EIS. As discussed in Chapter 2.0 of the Draft EIS, only those alternatives that are practicable and meet the purpose and need of the project are analyzed in detail.

Letter 73 Continued

Many more inadequacies could have been drawn from the report but time does not allow someone who has a job, land to take care of, and very little time to review it before comments deadline to fully explore all the topics. Enough have been looked at here that it does not seem necessary. Please do the right thing for the landowners around this mine and the people of Bastrop County by denying this permit at this time based on the many points, which have been exposed here.

Sincerely,

Daniel R. Hicks
Sandra E. Hicks

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Letter 73 Continued

Attachments for Comment Letter 73

The following attachments were submitted with this comment letter. The attachments have not been reproduced in this Final EIS; the attachments have been addressed, as applicable, in the specific responses to the related comments. The attachments are on file with the USACE.

- Figure 3.12-1 of the Draft EIS with commentor's property location indicated southwest of the proposed Three Oaks Mine.
- Habitat Management Guidelines for Bald Eagles in Texas.
- Ward, K. Jr. 2001. DEP Years Behind on Mine Runoff Rules. Excerpts from an article in the Sunday July 15, 2001, Charleston Gazette-Mail.
- Pennsylvania Code 273.243, Sedimentation ponds.
- Orr, T. No date. Times Staff Writer. CCW Rules Protect Utility Profits, not Groundwater.
- Mickens, J. No date. News Feature: Robbing Peter to Pay Paul.
- Davies, R., No date. Unclear at Alcoa.
- New York Lawyer. 2002. Vinson & Elkins "Boasts" of Work it did for Enron. August 19, 2002.
- PricewaterhouseCoopers Caught in Tyco Spotlight, September 30, 2002.
- Atkinson, D. 1999. Accountants in BCCI Net. Guardian. January 8, 1999.

Letter 74

November 4, 2002

Ms. Jennifer Walker, EIS Project Manager
U.S. Army Corps of Engineers
Fort Worth District
819 Taylor Street
P.O. Box 17300
Fort Worth, Texas 76102-0300

Re: Draft EIS-Three Oaks Mine

Dear Ms. Walker,

The Lone Star Chapter of the Sierra Club hereby submits comments on the draft Environmental Impact Statement for Three Oaks Mine, dated August 2002.

Water Resources

- 74-1 1. In determining future water supplies, the report fails to consider regional growth of the local population. The amounts expected to be used for mine depressurization and dewatering and groundwater exports to City of San Antonio are included, but the demand included for local municipal, private and agricultural use is per 1998 use at 20,000 acre feet per year. With doubling of the population predicted by state forecasts, the 20,000 acre feet is not likely to be an accurate prediction of future local demand of groundwater supplies. Also, the report appears to say that adequate water is present for all users, but nothing is stated about whether the aquifer will be mined or if aquifer can sustain this amount of pumping over time.
- 74-2 2. The potential loss of groundwater contributions to the Colorado River and other stream segments are not quantified in the report, even though the report states that groundwater beneath rivers and streams is state property. Since the Colorado River and other streams will become losing streams rather than gaining streams, how will the groundwater pumping be monitored and reported to the state?
- 74-3 3. All predictions included in this report are based on prior groundwater modeling and research. Current studies and modeling are nearing completion and the results should be included in the final EIS.
- 74-4 4. It is unclear whether springs are considered groundwater or surface water, when considering the potential loss of this water to private property owners. While it is understood that springs within the permit area will be destroyed, what about springs that will cease to flow outside the permit boundaries? Do property

Responses to Letter 74

- 74-1 The cumulative groundwater impact section (Section 3.2.3.3) of the Draft EIS addresses estimated future demands on groundwater and surface water supplies. These estimates come from TWDB projections that are available on their website. Estimates by the TWDB indicate that the Carrizo-Wilcox aquifer can supply the estimated water demand for the next 50 years. The EIS relied completely on TWDB projections and the *Water for Texas -2002* report of the TWDB.
- 74-2 The Colorado River crosses the outcrop of the Simsboro Formation over a 2-mile stretch of the river course. In this area, the Simsboro aquifer may provide baseflow to the Colorado River during times of low flow. During times of high flow, the Colorado River may recharge the Simsboro aquifer through infiltration of stream water. The estimated water table decline in the Simsboro in the vicinity of this 2-mile stretch where the Simsboro outcrop and the Colorado River interact is up to 20 feet. This drawdown may slightly reduce the groundwater gradient in the Simsboro aquifer and thus slightly reduce the baseflow to the Colorado River during times of low flow. This reduction in baseflow, if it should occur, would be minimal and probably not measurable. As for Big Sandy Creek and other drainages in the Simsboro outcrop near the proposed Three Oaks Mine, Alcoa, subject to any access restrictions, would install monitoring wells to monitor the interaction between groundwater and surface water and would monitor baseflow to the upper reaches of these streams throughout the period of mining at Three Oaks. Any identified mine-related impacts would be reported to the RRC and would be mitigated as directed by the RRC.
- The Draft EIS does not indicate that groundwater occur ring below streams and rivers is property of the state; the Draft EIS indicates that discharge in a watercourse that flows in sand and gravel deposits beneath the surface of the streambed (underflow) is property of the state. A text change has been made on page 3.2-5 of the Final EIS to clarify this statement.
- 74-3 The Draft EIS used the best available groundwater modeling studies. The current studies that may be nearing completion were not available, and preliminary data from these studies, especially the GAM model, were not provided to the USACE because of their preliminary nature. Please also see the response to general comment GW-1 in Section 4.5.4 of the Final EIS regarding use of the GAM model.
- 74-4 Springs were identified in the Draft EIS on the basis of USGS 7.5-minute topographic maps and National Wetland Inventory maps. Springs outside the proposed permit area were included and are indicated on Figure 3.2-22 of the Draft EIS. Springs that are fed directly by groundwater (i.e., they are below the groundwater table) are considered a groundwater resource. If mine-related impacts occur to a water supply such as a spring, the private owners of such springs would be compensated, or the water loss due to a decline in spring flow would be replaced, by Alcoa under the guidelines and requirements established by the RRC that govern groundwater use by mines. Springs that are fed by precipitation (phreatic springs) would not decline in response to a groundwater table decline. Additional text has been included on pages 3.2-63 and 3.2-81 of the Final EIS to clarify these issues.

Letter 74 Continued

74-4 | owners receive mitigation for this loss? What about impacts to wildlife outside
74-5 | the permit boundaries?

Ecosystem Destruction

- 74-6 | 1. Because strip mining involves complete destruction of the surface, there is massive destruction to local ecosystems. Though this practice is not prohibited by law, but in fact is regulated, the Sierra Club finds this practice archaic and undesirable.
- 74-7 | 2. Reclamation as required by law is not satisfactory to return the land to its original Post Oak Savannah state. The report should consider cumulative impacts of all projects and development that contribute to the declining number of acres of Post Oak Savannah in the United States, rather than just consider the cumulative impacts locally.
- 74-8 | 3. The stratigraphy of the current Sandow mine is compared to that of the proposed Three Oaks mine, assuming that the sites are very similar and operations can proceed similarly. However, the Three Oaks mining is planned adjacent to the Simsboro recharge outcrop while the mining at Sandow is further east of the outcrop area. As the land surface is removed, there is increased potential for collapse and damage to the outcrop and resulting decreased recharge to the Simsboro aquifer. Even if the Simsboro formation is not damaged, there is increased chance of pollution to the aquifer from mining adjacent and within the outcrop area.

Socioeconomic Impacts

- 74-9 | 1. Because the site of the Three Oaks mine is located in a rapidly growing area, it is expected that any socioeconomic impacts from the strip mine will be more severe than those experienced in the more rural Sandow mine area. Land values in the vicinity of the mine have already declined, and are expected to decline further if operations begin.
- 74-10 | 2. The majority of citizens and businesses in Bastrop County do not support the proposed mining operation as they wish to preserve the quality of life of the rural lifestyle and local community.
- 74-10 | 3. The gain of temporary construction jobs does not outweigh the loss to quality of life in the local community. While a few profit, the many suffer.
- 74-10 | 4. Research shows that activities that harvest natural resources in a community always leave the community in a worse economic condition after the resource is depleted.
- 74-10 | 5. The report does not include the fact that the aluminum market is in decline internationally which could affect the profitability and future operations of Alcoa, Inc. In fact, Alcoa is permanently shutting down infrastructure in Rockdale that has not been utilized for some time and is not expected to be needed in the future.

In summary, it appears that the draft EIS for Three Oaks mine is not an independent report by the Corp, but rather is a recoup of Alcoa's permit application. It is hoped that the Army Corp of Engineers will review and investigate independently all comments submitted by the public and utilize the new groundwater modeling results

Responses to Letter 74

74-5 | As described in Section 3.5.2.1 of the Draft EIS, mine depressurization pumping in the Simsboro aquifer potentially would reduce the surface water availability in certain intermittent gaining reaches of area streams and associated perennial pools, as well as naturally occurring seeps and springs that occur within the mine-related 10-foot drawdown area of the Simsboro outcrop. Riparian/wetland habitats associated with these areas also could be affected by the reduced water availability. The resulting degree of impact to wildlife resources would depend on a number of variables, such as the existing habitat values and level of use; species' sensitivity (i.e., level of dependency on riparian areas); and the extent of the anticipated water and riparian/wetland habitat reductions.

Mitigation measure SW-5 (see Table 2-15 of the Final EIS) would be implemented to monitor and mitigate potential impacts to seeps and springs. Alcoa's proposed Mitigation Plan (see Appendix E of the Final EIS) would be implemented to mitigate potential impacts to waters of the U.S. and associated riparian habitats.

74-6 | Comment noted.

74-7 | It is not within the scope of the Three Oaks Mine EIS to consider the cumulative impact of the loss of Post Oak Savannah habitat within the entire United States. As defined in the CEQ regulations for implementation of NEPA, this EIS has considered the cumulative impacts of past, present, and reasonably foreseeable future actions with the potential for cumulative impacts with the proposed Three Oaks Mine. These actions are identified in Section 2.6 of the Draft EIS.

74-8 | Mining at the Three Oaks Mine would be down dip of the Simsboro outcrop (and therefore the recharge area) of the Simsboro aquifer. As a result, mining of lignite in the Calvert Bluff would not affect the Simsboro outcrop. Depressurization of the Simsboro during mining at Three Oaks would lower the water table in the outcrop area of the Simsboro adjacent to the mine permit area. However, this decline in the water table would not cause a collapse of the Simsboro Formation because there is no overburden pressure on the Simsboro in the outcrop area from overlying formations. Municipal pumpage of groundwater from the Simsboro aquifer has been ongoing for the past 50 years; the water table in the Simsboro has been declining accordingly. No collapse of the formation has occurred as a result of this pumpage. Also, water quality in the Simsboro has not declined in the past 50 years.

74-9 | Please see the response to general comment SE-3 in Section 4.5.10 of the Final EIS relative to effects on property values from development of the proposed Three Oaks Mine.

74-10 | Comment noted. While it may be that the boom-bust cycles often associated with natural resource development in remote areas have left a number of communities without long-term, sustainable economic viability, the assertion that the Three Oaks Mine would cause similar effects in Lee and Bastrop Counties is questionable at best.

Letter 74 Continued

in the Three Oaks Final EIS. Thank you for the opportunity to submit comments on behalf of the Lone Star Chapter of the Sierra Club.

Sincerely,

Sheril Smith
Water Resources Chair

Responses to Letter 74

The project would not create an anomalous, short-term boom in the local economy because mining is already ongoing to the northeast at the Sandow Mine. As noted in the Draft EIS (Section 3.10.2.1), employment change, and other socioeconomic changes, would be minimal as a result of the Three Oaks Mine. In addition, there is significant diversity in the local economies, particularly in Bastrop County and increasingly in Lee County. As a consequence, the boom-bust effect of mining, observed in many remote areas of the American West where the mining has been the only significant economic driving force, would not be expected to occur in Bastrop and Lee Counties because this area is not solely dependent on the lignite resource for its economic viability. As Section 3.10.2.2 of the Draft EIS suggests, mining eventually would cease in the area, either in 2 to 3 years, if the Three Oaks Mine is not developed, or in approximately 25 years, if the proposed mine is developed. In either case, when mining ends, jobs would be lost. If, as assumed, the Rockdale aluminum smelter also would close at the time mining ends, there would be a substantially larger number of jobs lost. The result would be a major decline in economic activity in the study area, focused on Milam County, in particular. Even in Milam County, however, the "boom" cycle has been on-going for approximately 50 years. If the Three Oaks Mine should be approved, the cycle likely would continue for an additional 25 years, which is not typical of the short-term cycles addressed in much of the literature. Few communities would not welcome a 50- to 75-year "boom." The important consideration is whether, and how, they plan for the ultimate decline ("bust") that commonly follows depletion of the resources.

Letter 75

75

November 4, 2002

Ms. Jennifer Walker
Regulatory Branch
CESWF-PER-R
U. S. Army Corps of Engineers
P.O. Box 17300
Fort Worth, TX 76102-0300

Dear Ms. Walker:

The Lower Colorado River Authority (LCRA) appreciates the opportunity to comment on the Three Oaks Mine Draft Environmental Impact Statement (EIS). The LCRA is a conservation and reclamation district with a statutory responsibility for ensuring the protection of water quality in the lower Colorado River basin. We take that responsibility seriously and appreciate the U. S. Army Corps of Engineers' (Corps) efforts in the oversight and preparation of the Draft EIS.

The proposed Three Oaks Mine is a significant project with many aspects reaching into groundwater and/or surface water issues related to the Colorado River. It is with this perspective that we offer the attached detailed comments for your consideration when finalizing the Draft EIS and issuing a Clean Water Act, Section 404(a), permit. The LCRA's primary points are related to:

1. The protection of water quality in Big Sandy Creek and the Colorado River,
2. The protection of groundwater quality and quantity as it relates to public water supply aquifers,
3. The protection of surface water flow conditions,
4. The protection of the morphology of Big Sandy Creek,
5. A successful mitigation plan for the Colorado River basin.

Once again, we appreciate the opportunity to participate in this process and commend the Corps on a process that was both informational and inclusive of all parties with vested interests. If you have any questions regarding our comments, please contact Lisa Hatzenbuehler or Alicia Reinmund at 1-800-776-5272, ext. 4082 or 6730, respectively.

Sincerely,

Jesus Garza, Deputy General Manager
Lower Colorado River Authority

cc: Tommy Hodges, Sandow/Three Oaks Mine Manager
Molly Cagle, Alcoa Attorney
Honorable Mayor Tom Scott, City of Bastrop

Letter 75 Continued

1. The Protection of Surface Water Quality

- The LCRA is concerned with potential impacts from mined water and stormwater runoff on downstream surface water quality. The LCRA wants to maintain water quality in Big Sandy Creek and the Colorado River for public health, recreation and terrestrial- and aquatic-life uses. We want to ensure these water bodies meet the criteria established in the Texas Surface Water Quality Standards.

75-1

The LCRA acknowledges the surface water-quality monitoring program, which complies with the Texas Railroad Commission permit. However, we recommend, as a condition of the 404 permit, the Corps require Alcoa collect additional water chemistry data and sediment and whole effluent toxicity data in accordance to the "Guidance for Assessing Texas Surface and Finished Drinking Water Quality Data, 2002"¹ and to the Texas Surface Water Quality Standards. The purpose of analyzing these constituents is to determine water quality standards attainment. Table 1 outlines our specific recommendations.

The LCRA recommends the monitoring and analysis be consistent with the procedures set out in the LCRA's Clean Rivers Program Quality Assured Project Plan. We offer our assistance in the development and implementation of a quality assured monitoring program.

2. The Protection of Groundwater Quality and Quantity

- The LCRA is concerned with the potential impacts from the Three Oaks Mine project to water quality and water supply in the area's groundwater aquifers. The Draft EIS assumes an average hydraulic separation of 60 feet between the Simsboro aquifer and the Calvert Bluff. Studies by HSI Consultants, Inc.,² have shown that there is a substantially less thickness of clay between the two formations in some locations. Downward migration of poor-quality groundwater from the Calvert Bluff into the Simsboro aquifer could occur where the hydraulic separation is minimal and the Simsboro aquifer has been significantly depressurized.

75-2

The LCRA recommends, for the final EIS, the Corps evaluate the variability of the hydraulic separation between the Simsboro aquifer and the Calvert Bluff and determine if the poor water quality from the Calvert Bluff has the potential to impact the Simsboro aquifer where the separation is less than average and depressurization is anticipated.

The LCRA recommends the Corps require the use of laboratory methods approved by the Environmental Protection Agency for their groundwater monitoring program, which is a requirement for the Three Oaks Mine Texas Railroad Commission permit.

3. The Protection of Surface Water Flow Conditions

- The LCRA is concerned with the potential impacts to flow conditions of surface water from the drawdown of the Simsboro aquifer. The Simsboro aquifer contributes to the baseline stream flow of the Colorado River. The Draft EIS predicts a 20-50-foot drawdown in the Simsboro aquifer beneath the Colorado River, thus lessening this contribution. Also, the Draft

75-3

¹ Guidance for Assessing Texas Surface and Finished Drinking Water Quality Data, TNRC, Surface Water Quality Monitoring Program, 2002.

² Preliminary Hydrogeologic Investigation Related to Possible Mining Operations – Bastrop County Texas, HSI Consultant Inc, LCRA, 1981. Preliminary Hydrogeologic Investigation Related to Possible Mining Operations – Bastrop County Texas, HIS Consultant Inc, LCRA, 1982 update.

Responses to Letter 75

75-1

The text on page 3.2-83a of the Final EIS has been revised to further explain Alcoa's proposed surface water monitoring program under the TPDES and RRC permit requirements. Please also see the response to general comment SW-1 in Section 4.5.5 of the Final EIS relative to surface water monitoring. Beyond these requirements, the Texas Clean Waters Program and the overall evaluation of standards attainment for individual streams is the chartered responsibility of state agencies and authorities. Further, regulatory activities such as use-attainability and standards determinations are contingent upon background watershed conditions and numerous man-made factors (other than Alcoa's potential impacts) within the watersheds. Such assessments are outside the scope of Alcoa's potential impacts, and compliance with applicable regulations.

75-2

The clay layer separating the lowest lignite seam in the Calvert Bluff from the Simsboro aquifer varies in thickness across the mine permit area. The range in thickness within the mine permit area is from a low value of approximately 11 feet at the western margin of the mine block in the Year 1 block to approximately 175 feet in the far eastern part of the block in the Year 21 through 25 mine block. The thickness of the clay layer over most of the mine block ranges from 25 to 50 feet. Because some areas of the clay layer are exceptionally thick, the average thickness for the entire mine block is approximately 60 feet.

Seepage through the clay layer was estimated assuming saturation of the clay layer and using Darcy's Law (a generalized relationship for flow in porous media). Three areas of the mine block were chosen: 1) the western edge of the mine permit area in the Year 1 mine block where the clay layer is as thin as 11 feet, 2) the northern part of the permit area in the Year 1 mine block where the clay layer is as thin as 13 feet, and 3) the central part of the permit area where the clay layer ranges from 25 to 50 feet in thickness and averages approximately 35 feet. These three areas were tested using the three cumulative impact scenarios from the EIS: 1) Year 2030 – Three Oaks without SAWS, 2) Year 2030 – Three Oaks plus SAWS, 3) Year 2050 – Three Oaks plus SAWS, and 4) Year 2050 – SAWS without Three Oaks. The results of the calculations are shown in Table 75-2.

These calculations are very conservative. The vertical hydraulic conductivity used for the clay layer was the lowest measured value (1.0×10^{-8} centimeters per second [cm/s]). Measured values in the laboratory ranged from 1.0×10^{-8} cm/s to 1.0×10^{-10} cm/s. Using the most conservative value for vertical hydraulic conductivity, the travel time for water seeping through the clay layer from the Calvert Bluff to the Simsboro ranged from a low of 15 years to a high of 124 years. Assuming the most conservative case, it would be possible for water from the Calvert Bluff to seep through the clay layer in the areas where the clay is 13 feet thick or less in approximately 15 years by Year 2050. However, the mine would close around 2030, and the mine-related drawdown in the two aquifers would have begun to rebound by that time. In fact, it is likely that most of the rebound in the mine permit area would have occurred by Year 2050. Therefore, using Year 2030, the fastest travel time using the most conservative approach appears to be 27 years. This suggests, that by the time the Three Oaks Mine closes, some water from the Calvert Bluff in area A (western part of the mine block) where the clay layer is the thinnest may have seeped through the clay to the Simsboro. Area A is well within the mine permit area, so any impact on water quality in the Simsboro would be limited to the mine permit area. If SAWS or other municipal pumpage in the Simsboro prevents rebound of the Simsboro aquifer, then seepage through the clay layer may continue and may increase with time.

**Table 75-2
Estimated Seepage Rates Through Clay Bed Separating
Calvert Bluff and Simsboro Formations**

Scenario by Mine Block ¹	Water Levels Year 2000 (feet NGVD)		Calvert Bluff		Simsboro		Gradient ² (feet/feet)	Seepage Rate ³ (feet/day)	Time to Transi ³ Clay Bed (years)
	Year 2000 (feet NGVD)	Year 2000 (feet NGVD)	Drawdown (feet)	Water Level (feet NGVD)	Drawdown (feet)	Water Level (feet NGVD)			
Year 2030 – Three Oaks without SAWS									
Area A	500	450	50	450	100	360	8.18	7.72E-04	39
Area B	420	410	10	410	50	370	3.08	2.90E-04	104
Area C	440	340	100	340	200	240	2.86	2.70E-04	112
Year 2030 – Three Oaks Plus SAWS									
Area A	500	490	10	490	100	360	11.82	1.11E-03	27
Area B	420	410	10	410	100	320	6.92	6.53E-04	46
Area C	440	430	10	430	100	340	2.57	2.43E-04	124
Year 2050 – Three Oaks Plus SAWS									
Area A	500	490	10	490	200	260	20.91	1.97E-03	15
Area B	420	490	10	490	200	220	20.77	1.96E-03	15
Area C	440	490	10	490	200	240	7.14	6.74E-04	45
Year 2030 – SAWS without Three Oaks									
Area A	500	490	10	490	200	260	20.91	1.97E-03	15
Area B	420	490	10	490	200	220	20.77	1.96E-03	15
Area C	440	490	10	490	200	240	7.14	6.74E-04	45

¹ Area A = Western edge of mine block, Year 1 block
 Area B = Northern edge of mine block, Year 1 block
 Area C = Central part of mine block, Years 3-15.

² Gradient I = (Calvert Bluff water level – Simsboro water level)/(clay bed thickness).
 Clay bed thickness Area A = 11 feet (range of 11 to 13 feet).
 Clay bed thickness Area B = 13 feet (range of 13 to 17 feet).
 Clay bed thickness Area C = 35 feet (range of 25 to 50 feet).

³ Seepage rate = hydraulic conductivity x gradient/porosity.
 Where: porosity = 0.3 and hydraulic conductivity = 2.83E-05 (feet/day) (1.0E-8 cm/s).

Letter 75 Continued

EIS, based upon a limited data, made several assumptions in defining potentially gaining streams in this area of the Colorado River basin.

75-3

The LCRA recommends the final EIS include, as a part of the mitigation plan, the development of a study and model to determine the interaction between the Simsboro aquifer and surface water flow in the Colorado River basin. Specifically, the study should quantify the reduction in base flow in Sandy Creek and the Colorado River due to drawdown of the aquifer. The LCRA offers its assistance in the development of the study.

The LCRA recommends the final EIS include, as part of the mitigation plan, a strategy of how depletion of streamflow will be mitigated.

75-4

- The Draft EIS concludes that less than 10 feet of drawdown of the Simsboro aquifer is predicted to have no effect on groundwater baseflow contribution, 10-20 feet may have a less-than measurable effect, and more than 20 feet may have a measurable effect on groundwater baseflow contribution, page 3.2-78. The Draft EIS does not explain what is meant by a "measurable effect".

The LCRA recommends the Corps define "measurable effect" in the final EIS.

4. The Protection of Stream Morphology

75-5

- The LCRA is concerned with increased sediment transport and erosion in Big Sandy Creek and impacts to stream morphology.

The LCRA recommends the Corps includes, in the final EIS, an evaluation of the impact to stream morphology from discharge from the Sandow Mine Operation on Yegua Creek. The LCRA recommends this evaluation to validate the conclusion, "the proposed project would not contribute to sediment-related cumulative effects for waters of the U.S.," page vii.

5. A Successful Mitigation Plan

75-6

- The mined land should be reclaimed to pre-mine productivity and surface and groundwater resources should be mitigated adequately to ensure no long-term or permanent impacts.

The LCRA recommends that the Corps supports the additional mitigation measures, GW-1,2, SW-1,2,3,4 and FW-3 defined in Table 2-15 of the Draft EIS as a condition of the 404 permit. These measures will document baseline conditions, provide information for model re-calibration and water-quality assessment, and ensure coordination within regulatory agencies. These measures ultimately provide further protection for surface and groundwater resources.

75-7

- The Draft EIS includes plans for off-site mitigation and for mitigating on-site as impacts occur. The LCRA is concerned with the defined mitigation area and the proposed off-site mitigation plan. The Draft EIS states a total of 73.5 acres of waters of the United States may be affected as a result of water level changes in the drawdown area of the Simsboro outcrop, page vi. However, the Draft EIS defined the disturbance area as 67.4 acres, Appendix E, page 6. An accurate accounting of the affected acreage determines the adequacy of the mitigation plans.

Responses to Letter 75

75-3

Please see the response to comment 74-2 regarding the Colorado River. Also see the responses to general comments GW-6 and SW-1 in Sections 4.5.4 and 4.5.5, respectively, of the Final EIS relative to potential groundwater drawdown impacts on the Colorado River and surface water monitoring. If a mine-related depletion in streamflow is identified, the impact would be mitigated as required by the jurisdictional agencies.

75-4

Relative to surface and groundwater resources, a measurable effect refers to a measurable change in a parameter that is statistically defensible. That generally means that the change in the parameter exceeds the 95 percent confidence interval (arithmetic mean plus three times the standard deviation). Relative to the thresholds for estimating potential groundwater impacts, drawdown of the water table of less than 10 feet is considered within the range of seasonal variation and would be small enough that there should not be measurable impacts to surface water features or wells. Drawdown of 20 feet or greater in the water table may affect a well and probably would have a measurable impact on surface water features if the drawdown persisted for a substantial length of time.

75-5

Stream conditions downstream from the Sandow Mine were investigated by Horizon Environmental Services, Inc. and Lee Wilson & Associates, Inc. in late 2002. The studies included a ground survey, aerial photo review, and a helicopter reconnaissance. A total of 33 sites were visited on the ground, including sites that receive mine discharge and sites that do not. Field sites were measured for the ratio of bank height to channel width, the condition of riparian vegetation, and overall stream channel condition. Numerous photographs were taken. These investigations identified no examples of channel degradation below the Sandow Mine, although immediately below some outfalls it has been necessary for Alcoa to construct channel protection measures in accordance with RRC regulations. Minor sedimentation has occurred at some sites immediately below the mine. This sedimentation has occurred over short reaches below the most active discharge outfalls or where post-mining topography has substantially reduced the upgradient drainage area. In general, the stream morphology continues to be dominated by variations in geology and topography. Where erosion problems were observed in the watersheds, they were in association with activities not related to Alcoa. Such conditions primarily occurred at private road crossings or in some grazing areas located farther downstream in the watershed. The investigations support the overall conclusion of minimal erosion and sedimentation impacts from the proposed Three Oaks Mine.

75-6

Comment noted.

75-7

The waters of the U.S. including wetlands have been delineated, and the delineation has been verified by the USACE. The linear feet of waters of the U.S. within the Colorado and Brazos River watersheds have been added on page 3.2-100 of the Final EIS.

Letter 75 Continued

75-7

The LCRA recommends the Corps include, in the final EIS, wording that the waters of the United States will be delineated and verified by the Corps before initiating mining and that mitigation plans will be revised accordingly.

75-8

- Finally, the LCRA is concerned the off-site mitigation plan outlines activities only within the Brazos River basin. More than one-third of the disturbance area lies within the Colorado River watershed.

The LCRA recommends the final EIS include an off-site mitigation plan within the Colorado River watershed to restore, enhance and protect this basin's resources.

Responses to Letter 75

75-8

The USACE has continued its evaluation of potential surface water impacts within both the Brazos and Colorado River watersheds and has determined that additional off-site mitigation within the Colorado River watershed is required. Consequently, Alcoa has revised their Mitigation Plan to incorporate an off-site mitigation area located within the Colorado River basin. Please refer to Section 6.7 of the Mitigation Plan (Appendix E of the Final EIS) for details.

Letter 76

Letter 76 Continued

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76

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199900331

HILL GILSTRAP RIGGS ADAMS & GRAHAM, L.L.P.

A REGISTERED LIMITED LIABILITY PARTNERSHIP
ATTORNEYS AND COUNSELORS

1005 CONGRESS AVENUE, SUITE 800
AUSTIN, TEXAS 78701
TEL 512-457-9806
FAX 512-457-9066

AFFILIATED OFFICES
CHICAGO
DALLAS/FORT WORTH
LITTLE ROCK
RIO GRANDE VALLEY

MICHELLE A. MCFADDIN

November 4, 2002

VIA FEDEX: 8324 3039 5205

Ms. Jennifer Riley Walker
U. S. Army Corps of Engineers
Fort Worth District
P. O. Box 17300
Fort Worth, Texas 76102

Re: SOAH Docket No. 582-02-3008; TNRC Docket No. 2002-0484-IWD; In the
Matter of Alcoa's Application for TPDES Water Quality Permit; Proposed Permit
No. 04348

Dear Ms. Walker:

Please find enclosed Neighbors for Neighbors Public Comment on the Draft
Environmental Impact Statement for Alcoa's Proposed Three Oaks Mine.

Please contact me at (512) 457-9806 if you have any questions.

Sincerely,

HILL GILSTRAP RIGGS ADAMS & GRAHAM, L.L.P.

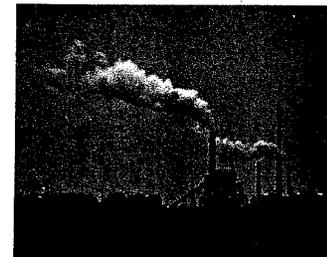
Michelle A. McFaddin
Michelle A. McFaddin

NOV 05 2002

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Substantive Comments Regarding the U.S. Army Corps of Engineers'

DRAFT ENVIRONMENTAL IMPACT STATEMENT For Alcoa's Proposed Three Oaks Mine



**NEIGHBORS FOR NEIGHBORS
November 4, 2002**

NOV 05 2002

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Neighbors for Neighbors
Public Comment relating to the U.S. Army Corps'
Draft Environmental Impact Statement
for ALCOA, Inc.'s Proposed Three Oaks Mine Site
(November 4, 2002)

Executive Summary

Neighbors for Neighbors, Inc., hereinafter referred to as "Neighbors" or "NFN," is a Texas non-profit corporation comprised of citizens living throughout the Central Texas region who are concerned about the impact that ALCOA, Inc.'s pending permit applications for a new, 16,000-acre lignite surface mine, if granted, will have on their communities and on their environment. Neighbors has conducted a detailed review of the U.S. Army Corps of Engineers' Draft Environmental Impact Statement (DEIS) for Alcoa, Inc.'s proposed Three Oaks strip mine. Our review included an examination of the pending permit applications for the proposed project along with the supporting technical information used by the Corps and its contractor, ENSR, to the extent that these documents were made available to us, in preparing the Preliminary Draft Environmental Statement (PDEIS) which was released to Alcoa only in March, 2002. In addition, we have reviewed federal and state agency standards, regulations and policies that include U.S. Environmental Protection Agency ("EPA") regulatory preambles, guidance documents and regulatory determination, U.S. Office of Surface Mining regulations, policies and guidance, state agency reference materials and studies as well as Alcoa's own detailed comments regarding the PDEIS in order to present a thorough and detailed response to the DEIS.

Based on this review, it is clear to Neighbors that the DEIS fails to meet the mandate of the National Environmental Policy Act for a full, impartial evaluation of the potential environmental impacts that may result if Alcoa is granted authorization in accordance with its pending permit applications to develop the Three Oaks mine. The DEIS includes numerous, significant omissions and errors of fact that distort both the specifics of Alcoa's proposed activities and their likely impacts on human health and the environment. The DEIS fails to explore adequately the alternative actions that are available to Alcoa in order to meet the company's stated need for fuel to power its Rockdale, Texas smelter facilities. Moreover, the DEIS fails to address available evidence that calls into question the validity of Alcoa's stated purpose.

The DEIS's inadequacies result from an extreme over-reliance on information provided by Alcoa and its consultants and from the failure to consult other, available information resources and to consider the public comment that has already been filed by several concerned, citizen and environmental groups including Neighbors' comments to the Texas Natural Resource Conservation Commission (TNRCC), now known as the Texas Commission on Environmental Quality (TCEQ), dated June 27, 2002, the comments submitted by the Bastrop County Environmental Network ("BCEN"), the Hoosier Environmental Council, the Audubon Society and other, concerned groups. The Corps' decisions regarding the information sources that were considered and the assumptions that were accepted in preparing the DEIS appear to Neighbors to be arbitrary and capricious and not protective of the public interest.

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*Neighbors for Neighbors Public Comment to the USACE
Draft Environmental Impact Statement for the Proposed Three Oaks Mine*

Neighbors for Neighbors therefore urges the U.S. Army Corps of Engineers to acknowledge the substantial inadequacies of the DEIS and to take all necessary steps to remedy those inadequacies by revising the DEIS in the following ways:

- Prior to finalizing the Environmental Impact Statement, the Corps should consult in depth with local citizens, independent, technical experts, civic, municipal, county, state, and federal agencies and other, interested organizations to obtain more complete and unbiased information regarding Alcoa's plans and their potential impacts on Central Texas communities;
- The Corps should take those steps needed to substantiate Alcoa's numerous, unsupported and sometimes contradictory assertions, including the company's claims about the future of its Rockdale smelter, its claims about the effects that its activities will have on surface and groundwater quality in the region, on the availability of groundwater supplies in the future for those who live around the mine site and its claims that no significant, adverse effects will impact wildlife habitat, endangered species, cultural resources, noise and light pollution and other factors which must be considered by the Corps prior to finalizing the DEIS;
- The Corps should obtain independent verification from key, contractual documents and related correspondence with Alcoa's partners, Texas Utilities' Sandow steam electric generating station, City Public Service of San Antonio and San Antonio Water System, including the contracts and/or agreements that Alcoa currently has in place with Texas Utilities to manage those industrial solid wastes generated by Texas Utilities' Sandow facility at Alcoa's lignite mining sites, any agreements that Alcoa may have with City Public Service relating to the development of the lignite resources present in and around the Three Oaks mine site and the contract that Alcoa has in place with the San Antonio Water System to furnish water pumped from the Three Oaks mine site to San Antonio for water supply purposes;
- The Corps must ensure that all necessary federal and state regulations, permits, reviews, and/or approvals have been addressed fully by Alcoa and/or by the agencies responsible for regulatory oversight for this project. For example, the DEIS concludes that Alcoa's proposed project will result in the removal of approximately 38 miles of streams and creeks and yet there is no evidence that Alcoa has coordinated in any way with the Federal Emergency Management Agency to ensure that the removal of these streams will not exacerbate regional flooding. The DEIS also discusses Alcoa's plans to mitigate the adverse impacts to wetlands through the creation of additional wetlands. What the DEIS fails to examine is whether these newly-created wetlands will be located on properties owned by third party landowners, including Neighbors members who live immediately adjacent to Alcoa's proposed wastewater discharge routes;
- The Corps must also ensure that the information included in Alcoa's numerous permit applications and other public documents are consistent. In reviewing the pending permit applications for this project, including recent technical amendments to Alcoa's surface mining and reclamation permit applications, Neighbors has discovered significant inconsistencies in certain basic parameters of Alcoa's proposed operations. For example, in early application materials, Alcoa proposes to mine 6,000,000 tons of lignite per year whereas in more recent technical amendments, this figure has jumped to 8,000,000 tons per year. This is a significant difference and will affect the volumes of wastewater that will be generated as the result of these mining activities. There are

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numerous other examples of inconsistencies among Alcoa's pending permit applications that need to be resolved before the Corps can finalize any study of the impact that these proposed activities will have on the surrounding community and environment; and

- The Corps should address Alcoa's poor compliance history. Not only is Alcoa under enforcement at the federal and state level for major violations of the Clean Air Act at its smelter facilities, it is one of the largest emitters of conventional pollutants in Texas in part because it burns low quality lignite to fuel its smelter operations. Not only does Alcoa have a poor compliance history with respect to its emissions from its Rockdale smelter, Alcoa has been charged with repeated violations of the federal Surface Mining Control and Reclamation Act and the Texas Natural Resource Code and Railroad Commission regulations during the past ten year period including the unauthorized discharge of wastewater from its mining operations at Sandow and its practice of mining in unauthorized areas of the site. Neighbors also believes that Alcoa is also violating the federal Resource Conservation and Recovery Act as well as the Texas Solid Waste Disposal Act by dumping enormous volumes of coal combustion wastes generated not only by itself but also by Texas Utilities' Sandow steam electric generating facility into unlined and unmonitored, mining pits as "minefill." Although Alcoa refers to this activity as "recycling," it is nothing more than the open dumping of industrial wastes which may contain elevated and even hazardous levels of mercury, arsenic, selenium, manganese and other heavy metals, dioxins, furans and radionuclides, a use which constitutes disposal and which has been outlawed for nearly every other industry in the United States since 1980. Although the Corps acknowledges in its DEIS that Alcoa is "recycling" more than 875,000 TONS/YEAR of coal combustion wastes at its Sandow mine site and that this practice may continue at Three Oaks mine, the Corps has no recent documentation on the physical or chemical composition of those waste materials being generated by Alcoa and "recycled" as mine fill and road base at the Sandow mine site and proposed for such reuse at the Three Oaks mine site. Even worse, neither the Corps, the EPA nor the TCEQ has any information whatsoever on the volumes or physical composition of those wastes generated by Texas Utilities' Sandow facility that Alcoa is managing at its mine sites. To finalize a report that recognizes that this practice is occurring on a massive scale and will occur in the future at a site subject to an EIS without examining its effects on soil, surface water and/or groundwater resources in and around the site is not only arbitrary and capricious, it is an abuse of discretion.

If the Corps takes the necessary steps to prepare a document that is responsive to NEPA's requirements, as Neighbors has requested above, that document will bear little resemblance to the current DEIS. Therefore, it is also incumbent on the Corps to issue a second *Draft Environmental Impact Statement* with the concomitant opportunities for public review and comment. A failure to make the revised document available in draft form would deny the public the opportunities for full participation and input intended by NEPA.

Detailed Comments

The following pages present, in detail, Neighbors for Neighbors' substantive comments describing errors, omissions, and flawed, unsupported assumptions contained in the DEIS. These comments are organized by topic, beginning with several broad, "big picture" concerns. Additional items address specific sections or subsections of the DEIS. For each numbered item, we have listed one or more major concerns, followed by detailed supporting documentation.

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*Neighbors for Neighbors Public Comment to the USACE
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1. Flawed assumptions regarding the stated purpose of Alcoa's proposed project

Overview. The DEIS erroneously relies on the assumption that the Three Oaks Mine — and only the Three Oaks Mine — would assure the long-term operation of Alcoa's Rockdale smelter. The DEIS describes the "purpose of and need for action" as follows:

The purpose of the proposed Three Oaks Mine is to provide a long-term, economically stable fuel supply for the existing Rockdale power generating station, which supplies power for Alcoa's Rockdale aluminum smelter... Alcoa projects that it needs to have an economically viable alternate fuel source developed and available to feed the power generating facilities by late 2003 or terminate operations at the Rockdale aluminum smelter. (pp. 1-7, 1-8)

The DEIS further states that "Alcoa's purpose and need for continued smelter operations" must be "retained" by the Corps' recommended actions, as mandated by the National Environmental Policy Act (Table 2-1) — despite the fact that the Corps' instructions for preparing an EIS state that "the Corps, will in all cases, exercise independent judgment in defining the purpose and need for the project from both the applicant's and the public's perspective."

The DEIS justifies its support for full approval of the Three Oaks Mine by echoing Alcoa's assertion that Three Oaks will sustain the long-term health of Alcoa's Rockdale smelting complex, and that without Three Oaks, the smelter would inevitably close. However, the Corps has failed to take necessary steps to assess the validity of these assertions. In addition, the Corps has made assumptions related to that purpose that cannot be supported by the available evidence. *The DEIS is thus fatally flawed in its reliance on a stated purpose and need that is not grounded in supportable facts.*

The DEIS makes unsupported assumptions regarding Alcoa's three Rockdale power generating units.

The Corps, as stated in the DEIS, makes the assumption that the future of Alcoa's three, aging power generating units is secure. This assumption is reflected in several statements:

Alcoa has applied for air permits for its three 120-MW units under the Texas Voluntary Emission Reduction Permit (VERP) process... Alcoa is currently evaluating technologies to achieve these emissions reductions. (p. 1-6)

Alcoa plans a number of modifications to their three generating units as part of the VERP process. Additional modifications also may be implemented as a result of recent USEPA and TNRCC [now TCEQ] enforcement actions related to the facility. (p. 2-9)

For purposes of this analysis, the USACE assumes that the No Action Alternative would result in closure of Alcoa's aluminum smelter. It is further assumed that the

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76-1 As indicated in the response to general comment Alternatives-1 in Section 4.5.2 of the Final EIS, it is not the USACE's responsibility in the EIS to provide a comprehensive economic analysis of Alcoa's existing Sandow Mine, power generating units, or smelter. However, the EIS has evaluated Alcoa's assertion that the use of local lignite represents the only practical option for power generation for the Rockdale smelter. The USACE also has independently evaluated Alcoa's stated implications regarding the No Action Alternative relative to the power generating units and the smelter.

As indicated in the comment, Alcoa has three options for compliance with their VERP: 1) install wet scrubbers on the existing boilers; 2) install fluidized bed boiler technology, or 3) shut down the old units by the end of 2007. Alcoa has submitted an amendment to their VERP for the construction of two fluidized bed units for their power plants; on November 20, 2002, TCEQ determined Alcoa's application was administratively complete.

76-1

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*Neighbors for Neighbors Public Comment to the USACE
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four electrical generating units [the three owned by Alcoa and Texas Utilities' Sandow unit] would be converted to use western coal. (p. 2-4)

In its discussions of the three power generating units in Section 2, the DEIS addresses two options that Alcoa may pursue in making required emissions reductions: installation of flue gas scrubbers or use of fluidized bed boiler technology. Nowhere in this section does the DEIS mention a third option that, from the available evidence, is equally possible: that of permanent shutdown of all three units. The DEIS does mention the shutdown option, in passing, in the Air Quality section, p. 3.8.21. Permanent shutdown would throw the smelter's future into doubt, since Alcoa officials have stated (*Rockdale Reporter*, 8/16/02) that electricity from the Texas Utilities power station alone would not be sufficient to power all six potlines at the Rockdale smelter.

Both Alcoa's VERP submission and its negotiations with the EPA and TCEQ include the option of shutting down the three boilers. In a letter of transmittal to the (then) TNRCC, submitting its VERP application, Alcoa stated that, rather than taking the necessary steps to reduce emissions, the company may elect instead to shut down the three power plants. Furthermore, in August 2002, the *Austin American-Statesman* (8/13/02) and other area newspapers reported that Alcoa and the federal and state agencies had reached a tentative agreement regarding terms of settlement over the Notices of Violation alleging violations of the federal and state Clean Air Acts. Those terms list three options for Alcoa's power generating units: 1) the installation of scrubbers; 2) teardown and reconstruction using fluidized bed technology; or 3) permanent shutdown. The tentative terms of settlement give Alcoa 18 months in which to determine which of these three options it will pursue.

76-1 The Corps, as stated in the DEIS, assumes that Alcoa will pursue either the scrubber option or the fluidized bed option in addressing its pollution cleanup at Rockdale, even though there is no apparent basis for favoring those options over that of permanent shutdown. Further, in basing production figures on a total of 7 million tons of lignite per year — an amount required if fluidized bed technology were to be used — the Corps seems to be weighting its assumptions toward the fluidized bed option. This may be due to the fact that, as experts have pointed out to Neighbors for Neighbors, Alcoa's three boilers appear to have been built too close together for the installation of scrubbers to be a viable option.

If Alcoa has informed the Corps that the shutdown of its three boilers is no longer a probability, then that is information relevant to and needed by the EPA, the Department of Justice and the citizen's groups that are suing Alcoa. If Alcoa has *not* made any such indication, then the Corps must give equal weight to each of the three options, including the shutdown option, which would have massive implications for the stated "purpose of the project," upon which the entire Environmental Impact Statement is predicated.

The DEIS fails to address evidence indicating that the Rockdale smelter is likely to shut down even if the Three Oaks Mine is approved and established.

76-2 A "reasonably foreseeable action," with or without the availability of Three Oaks lignite, is the closure of the Rockdale smelter within the next five years. There is substantial evidence for this likelihood. According to Alcoa, the Rockdale smelter is barely competitive right now (Hodges, presentation at DEIS hearing, 10/2/02). If one is to believe that particular Alcoa assertion, as the

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76-2 The USACE does not consider closure of the Rockdale smelter as a reasonably foreseeable future action associated with possible approval of the proposed Three Oaks Mine. However, the USACE has considered and analyzed smelter closure as part of the No Action Alternative in the EIS (see Section 2.3 of the Draft EIS). The USACE recognizes that the smelter could close for many reasons independent of the Proposed Action. However, it is highly probable, if not certain, that permit denial would lead to closure and, thus, be the proximal cause of the resulting adverse social and economic impacts. While the smelter is a primary consumer of electrical power provided by the Rockdale generating units, the purpose and need for the Proposed Action is not limited to support for the smelter; it also includes providing fuel for generation of electricity to be sold on the grid.

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Corps has chosen to do, then the smelter's days are surely numbered. Alcoa-Rockdale is incurring significant capital and other expenses related to its required emissions clean-ups and other activities. There are also other factors that could make Three Oaks lignite more expensive to operate than Alcoa's current estimates including the following:

- the failure of Alcoa's attempt to blend lower-quality and higher-quality lignite, a process which, as described in the DEIS, is not yet proven. In that case the substantial quantities of lower-quality lignite would be useless (DEIS, p. 2-19).
- additional costs resulting from Alcoa's failure to obtain road approvals on which current cost estimates rely. This would include the costs of another major permitting process (Railroad Commission [RRC¹ permit approval proceedings, 9/02).
- costs arising in the event that San Antonio's City Public Service decides to claim Three Oaks lignite for its own use (Alcoa-CPS contract; public comment by Barry Williams, 10/2/02), including costs related to Alcoa's obligations to provide Texas Utilities with fuel — another unverified assumption that the Corps has chosen to take at face value.

Alcoa has stated for the public record that factors other than the failure of Three Oaks could prompt the smelter's closure, including federal regulation of additional pollutants such as mercury or carbon dioxide, the tightening of federal air emission (MACT) standards, union demands, and/or citizen demands (see unsuitability proceedings, RRC, 2000-2001). The Corps must be consistent in attending to Alcoa's threats. If the Corps believes Alcoa's threat that the smelter will close if Three Oaks lignite does not become available, then it also must accept Alcoa's assertions that there is a probability that the smelter will close for other reasons. If the Corps does not believe Alcoa's threats, then the "purpose of the project" must become something other than the continued operation of the Rockdale smelter and its concomitant economic benefits.

Alcoa's corporate offices have been simultaneously cutting back U.S. aluminum production capacity, expanding overseas production capacity, and diversifying, particularly into plastics. Alcoa has announced plans for production expansion in Iceland (construction of a new, state-of-the-art smelter that conceivably could incorporate capacity for producing the solid rocket fuel that is currently produced only in Rockdale), in Norway (with Alcoa attempting to acquire a majority interest in a major Norwegian aluminum production company), in China (again with Alcoa acquiring interests in China's major aluminum production company), and in Brazil (with a variety of major activity). The company also has just signed a letter of intent with the government of Suriname, to conduct a feasibility study for mining bauxite and for building a hydrosmelter in that country. (See *AFX News*, 10/17/02; *Business Standard*, 10/16/01; *New York Times*, 7/16/02; Reuters, 3/18/01, 6/28/02, 7/10/02, 8/27/02, 9/27/02, 10/2/02.)

One-fourth of Rockdale's smelting capacity was permanently shut down this summer, rendering inaccurate the DEIS's statements regarding the smelter's capacity and standing as the largest smelter in the U.S. (Alcoa press release, 7/31/02). Recent statements by Alcoa executives clearly lay the groundwork for further cuts in the U.S.:

¹ For consistency's sake, these comments adopt the acronym generally used by the Corps in the DEIS to indicate the Railroad Commission of Texas, i.e. RRC.

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“As we explore projects around the world we must take a hard look at assets in the United States, where escalating energy and labor costs have made many smelters less globally competitive,” said Al Renken, president of Alcoa Primary Metals...
“Throughout the year, we will continue to explore potential adjustments — both closings and restarts — as marked conditions warrant.” (Alcoa press release, 7/31/02)

[Alcoa spokesman Jake Siewert discussed the Iceland project with the *New York Times*, 7/16/02:] Hydropower, [Siewert] added, would at least be cleaner than a coal-fired smelter somewhere else.

76-2 In recent months Alcoa has been including, in its Three Oaks-related documents, a scenario in which the Rockdale smelter would close but the three Alcoa-owned power generating units would be rebuilt, using a “clean coal” fluidized bed technology, and operated to sell electrical power “on the grid.” In the Pacific Northwest, Alcoa has shown itself to be perfectly willing to shut down smelters in order to turn a multi-million dollar profit by selling electrical power instead (Associated Press, 6/25/01; *In These Times*, 7/9/01). In the context of Texas’s newly deregulated electrical utility market, that scenario appears feasible for Rockdale, as the DEIS itself acknowledges. However, such a scenario would not include the local economic impact provided by the smelter — which has been the driving force behind most support for Alcoa’s proposed Three Oaks Mine.

Given that Alcoa’s international projects are still several years away from completion, and given the importance of the “sustaining the smelter” rationale for maintaining support for Three Oaks among its Milam County constituents and elected officials, the company would have no reason to reveal any probability that the Rockdale smelter is headed toward permanent shutdown. In fact, Alcoa’s shutdowns tend to occur without notice.

The DEIS fails to substantiate the claim that Alcoa’s Rockdale smelter would close if the Three Oaks Mine is not approved.

76-3 While there is evidence indicating the likelihood that Alcoa’s Rockdale smelter may be shut down for reasons unrelated to the Three Oaks Mine, there is also a basis for arguing that the smelter’s shutdown is an empty threat. As noted earlier, Alcoa-Rockdale has made this threat many times since the smelter began its operation — even going so far as to state, in proceedings before the Texas Department of Transportation, that a neighboring landowner’s demand for improved road access to his property would cause sufficient economic hardship to force the smelter’s shutdown (see RRC unsuitability proceedings, 2000-2001).

There is no documentation from Alcoa that company executives, including those at the top decision-making level in Pittsburgh, have made the decision that the Rockdale smelter must close if the Three Oaks Mine is not approved. The DEIS’s source for this assertion is local mine manager, Tommy Hodges. Neighbors for Neighbors has submitted sworn affidavits, as part of official RRC proceedings, attesting to conversations by two Neighbors board members with high-level Alcoa officials in Pittsburgh, who stated that the company is looking at fuel sources other than lignite to power the Rockdale smelter; these affidavits note that the smelter’s shutdown was not included in the options discussed by Alcoa’s corporate representative (see RRC unsuitability proceedings, 2000-

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76-3 Relative to closure of the Alcoa smelter as a component of the No Action Alternative, the USACE has placed the responsibility for the definition of this No Action Alternative scenario on Alcoa, with USACE independent review of the basis for this scenario. The source of information provided by Alcoa is cited throughout the Draft EIS. Please also see the response to comment 76-2.

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76-3 2001). The Corps needs to document and assess the numerous instances in which Rockdale officials have threatened the smelter's closure. In addition, the Corps should require official written documentation from the highest corporate level, attesting that the smelter would close if Alcoa does not obtain approval for the Three Oaks Mine.

The DEIS fails to address the implications of new technological developments for Alcoa's proposed plans.

76-4 Alcoa has been testing a new "inert anode" smelting process that would cut its electrical power usage by as much as one-third (*Mining Journal*, 5/3/02). This new process is highly relevant to the Corps' consideration of Alcoa's plans. On the one hand, there is the potential for adapting the Rockdale smelter to use this new process — a step that would significantly change the cost equations for furnishing electrical power to the smelter. On the other hand, the new technology may be more cost-effective if installed in newly constructed smelters, such as Alcoa's proposed Icelandic smelting operation — in which case the likelihood of permanent shutdown for the Rockdale smelter becomes even stronger. In giving weight to Alcoa's stated purpose for the Three Oaks project, the Corps needs to consult with independent experts who can speak knowledgeably regarding the state-of-the-art for aluminum smelting operations and the relative circumstances and long-term viability of Alcoa's Rockdale smelter.

2. Failure to assure review of complete, comprehensive, and consistent information regarding Alcoa's plans and practices

76-5 **Overview.** In spite of its massive size and level of detail, the DEIS is fatally flawed by its over-reliance on the skewed perspectives of Alcoa and its battery of hired consultants. With numerous, important resources readily available to it, from local citizens to hydrological experts to other federal and state agencies, the Corps at every turn chose instead to rely on Alcoa and its commissioned reports and hired consultants. Alcoa's imprint even extends to changes — well beyond corrections or confirmations of fact — to the Preliminary DEIS, a document that was not made available for review by the public or by potential information resources beyond Alcoa's circle of influence for six months after it was released to Alcoa. As these comments will demonstrate with both scope and specificity, this choice has resulted in a document that fails to accurately represent Alcoa's current practices, the company's plans for the Three Oaks region, and the enormous impacts that those plans and practices will have on the surrounding community and the environment.

Inconsistencies in Alcoa's plans permeate the various filings Alcoa has made with different agencies. Many of these inconsistencies are reflected in the various sections of the DEIS (for example, varying figures regarding quantities of groundwater to be pumped). In other instances the DEIS presents only one set of information, with no acknowledgement that other, inconsistent information is on the table in other permit applications and/or other Alcoa documents (for example, quantities of lignite to be mined, or the status of Alcoa's proposed road changes). To be responsive to the mandate of the National Environmental Policy Act, the Corps needs to thoroughly re-examine Alcoa's plans and to assure satisfactory resolution of all contradictions and inconsistencies. At a minimum, the Corps needs to assure — by direct examination, rather than reliance on assurances from Alcoa — the consistency and validity of information among the following:

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76-4 The description of the Purpose and Need for Action (Section 1.2 of the Draft EIS) and the description of the Proposed Action (Section 2.5 of the Draft EIS) are based on information provided by Alcoa. The USACE places the responsibility with Alcoa for providing accurate and current project-related information for the EIS, while being cognizant of its responsibility for the accuracy of the NEPA documentation. See the response to general comment NEPA-1 in Section 4.5.1 of the Final EIS regarding information provided by Alcoa. Please also see the response to comment 76-2.

76-5 Please see the response to comment 76-4 regarding Alcoa's responsibility to provide accurate information as the basis for the description of the Proposed Action. Also see the response to general comment NEPA-1 in Section 4.5.1 of the Final EIS relative to reliance on baseline data collected by Alcoa's contractors.

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- 76-5
- Alcoa's current status in relation to Notices of Violation issued by the Environmental Protection Agency and the Texas Commission on Environmental Quality (TCEQ);
 - Alcoa's Three Oaks mine permit application to the Railroad Commission of Texas (RRC), as approved by the Commission in September 2002;
 - Alcoa's submissions to the RRC regarding the status of its Sandow Mine;
 - Alcoa's wastewater discharge application with the TCEQ;
 - the TCEQ's draft permit;
 - Alcoa's Section 404 permit application with the USACE;
 - all relevant FEMA notifications, drainage surveys and/or stream channel modification applications and related national flood insurance-based application requirements;
 - Alcoa's Voluntary Emissions Reduction Program (VERP) applications for its Rockdale smelter and power plant units;
 - all descriptions of proposed road changes furnished by Alcoa to the Texas Department of Transportation, to relevant county governments, and to the public via required public notice; and
 - all relevant provisions of Alcoa's contracts with Texas Utilities, San Antonio's City Public Service (CPS), the San Antonio Water System (SAWS), and any other entities with whom Alcoa has contracted to provide groundwater from the Sandow and/or Three Oaks sites.

The DEIS fails to address the implications of Alcoa's status in relation to Notices of Violation issued by the Environmental Protection Agency and the TCEQ, or in relation to a current citizens suit regarding the Rockdale smelting complex's air emissions.

- 76-6
- The DEIS barely acknowledges the fact that Alcoa-Rockdale is currently under citation by the EPA and TCEQ for violating provisions of the federal and state Clean Air Acts and makes no mention at all of a citizen's suit that was filed by Neighbors for Neighbors, Environmental Defense, and Public Citizen against Alcoa under these Clean Air Act authorities. Both the agency Notices of Violation and the citizen's suit have relevant implications for Alcoa's Rockdale Operations. However, the Corps chose not to consult with any of the three parties to the citizen's suit, the EPA or the U.S. Department of Justice.

The DEIS does not address Alcoa's strip-mining plans as laid out in its final supplements to the Railroad Commission of Texas, and as covered by the permit granted by the RRC in September 2002.

- 76-7
- There are substantive inconsistencies between the strip mining plans assessed by the Corps in this Draft Environmental Impact Statement and the plans recently approved by the Railroad

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- 76-6
- As indicated in the comment, the Draft EIS acknowledges the USEPA and TCEQ notices of violation, as appropriate, in Section 1.1.2.2 (Rockdale Power Generating Facility description). To the extent it is relevant, the EIS has considered the implications of Alcoa's VERP in the cumulative impact assessment. The filing of the citizens' suit is not considered relevant to the EIS analyses of the proposed Three Oaks Mine, including the analyses of cumulative impacts.

- 76-7
- Please see the response to general comment Alternatives-3 in Section 4.5.2 of the Final EIS relative to Alcoa's alternate mine plan.

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76-7 Commission of Texas ("RRC"). The DEIS references three supplements to Alcoa's initial permit application — but Alcoa submitted a total of five supplements to the RRC, the most recent in late August 2002. The fourth and fifth supplements outline an "alternate mining plan" that is nowhere addressed in this DEIS. In fact, the permit issued by the RRC in September 2002 calls for a different scope and sequence of mining during the project's first three years, given the lack of county and state approvals to move roads as specified in Alcoa's earlier mine plans (and as incorrectly described in the DEIS). The permit allows for only three years of mining activity before Alcoa must either secure all necessary road approvals or apply for a revised permit from the RRC. The DEIS includes no restrictions or contingency plans to address possible consequences of a revised permit application.

The DEIS fails to address inconsistencies between Alcoa's mine permit application and TPDES permit application.

76-8 Portions of Alcoa's wastewater handling and discharge plans, as described in the company's pending TPDES permit application with the TCEQ, are inconsistent with the provisions of Alcoa's strip mining permit application. Alcoa's TPDES permit application addresses impacts of mining approximately 6 million tons of lignite per year, while the company's most recent submissions to the RRC call for mining up to 8 million tons of lignite per year. The DEIS fails to address these discrepancies or the potential impacts of wastewater handling and discharge related to mining significant additional quantities of lignite. There are other discrepancies as well.

The DEIS fails to substantiate or to address the implications of the provisions of Alcoa's contracts with Texas Utilities, San Antonio's City Public Service, and the San Antonio Water System.

76-9 Rather than reviewing the relevant contracts to assess their implications, the Corps has accepted at face value the interpretations of local Alcoa officials regarding the impact of these contracts on the proposed project and on Alcoa's options for operating its Rockdale facilities. This is true in spite of major questions and concerns that call for independent verification. For example, the DEIS (p. 1-7) relies on a statement by Alcoa's mine manager, Tommy Hodges, that the provisions of Alcoa's contract with Texas Utilities would make Alcoa liable for massive capital and annual costs should the Three Oaks Mine not be approved. This assertion is a key point in supporting Alcoa's continued reliance on lignite as a fuel source. Yet the Corps failed to review the contract or to consult with Texas Utilities, with Alcoa's attorneys, or with others who could address questions as to whether Alcoa could be held responsible for future actions over which it lacks complete control (i.e., approval for the Three Oaks Mine), and whether Alcoa, with its extensive and expert legal representation, would be so careless as to enter into a contract containing such an onerous burden.

In addition, the DEIS fails to address the implications of some contractual provisions for the Corps' conclusions as to the impact of the "Proposed Action" vs. the "No Action" alternative. For example, Alcoa's contract with San Antonio's City Public Service (CPS) includes a provision allowing CPS to claim lignite from Three Oaks for its own use. Yet the Corps has made no exploration of the implications of this provision — a provision CPS has emphasized as a critical reason for supporting the Three Oaks Mine (Barry Williams comments to the USACE, 10/2/02) — including its impact on Alcoa's stated contractual obligation to furnish lignite or an alternative fuel to Texas Utilities.

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76-8 In reviewing Alcoa permit documents during EIS preparation, the USACE identified inconsistencies in project description information. Alcoa has revised the applicable permit documents to make them consistent. All inconsistencies have been noted and addressed in the Final EIS. Several of these regulatory processes are occurring concurrently.

76-9 Please see the response to comment 76-4 regarding Alcoa's responsibility to provide accurate information for the EIS. Please refer to the response to general comment NEPA-3 in Section 4.5.1 of the Final EIS relative to the relationship of the Alcoa/SAWS and CPS/SAWS contracts to the Three Oaks Mine EIS. The USACE reviewed documents applicable to the analyses in the EIS.

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76-9

The DEIS (p. 2-82) cites maximum groundwater pumpage figures under the Alcoa-SAWS contract. Had the Corps reviewed the actual contract rather than relying on Alcoa's assurances, the DEIS might have reflected more accurate estimates of the quantities allowed under the terms of the contract.

(NOTE: Additional detail regarding specific issues related to each of these contracts may be found in other sections of these comments.)

The Corps has failed to consult with a variety of important sources of information and expertise regarding water resources and the impacts of groundwater withdrawals on the Three Oaks region, relying instead on Alcoa and its consultants for perspective on this critical issue.

76-10

In assessing water resources and potential impacts, the DEIS relies heavily on the work of R.W. Harden & Associates, an Alcoa-commissioned consulting firm, and on the Brazos G Regional Water Planning Group's groundwater flow model, which was developed and applied by Harden & Associates. The Corps appears to have ignored a major study by the University of Texas Bureau of Economic Geology (Dutton, 1999); though the study is cited in the DEIS's reference list, its methods and findings are nowhere reflected in the text. Nor did the Corps consult with the Lost Pines Groundwater Conservation District or its consulting hydrologist, Robert Kier, or with Neighbors for Neighbors' consulting hydrologist, George Rice. Nor did the Corps consult with the Lower Colorado River Authority (LCRA) or the Brazos River Authority (BRA). R.W. Harden reviewed information for the Preliminary DEIS; the Corps could as easily — and productively — asked any and all of these additional resources to review the preliminary methods and findings as well. Representatives from the U.S. Geological Survey ("USGS") and the U.S. Office of Surface Mining ("OSM") did review modeling; however, they themselves noted the limited value of their review, given the lack of contextual knowledge — knowledge that local experts certainly have. Moreover, the USGS expressed significant concern with the underlying assumptions used in these models.²

76-11

The Corps did not consult with the Federal Emergency Management Agency ("FEMA"). If it had done so, the Corps would have learned that Alcoa apparently has not addressed all relevant FEMA requirements related to floodplain management. FEMA floodplain management regulations require that local (county) floodplain administrators develop a program that includes permitting requirements for activities that will alter floodways. A permit must be obtained when building or enlarging a structure or mining, dredging, filling, grading, paving, excavating, drilling or storing materials within flood hazard areas.³ Any structural or nonstructural activity that may affect flooding or flood damage must have development permit authorization from local floodplain administrators who are then required to coordinate with FEMA. Neighbors has filed Public Information Act requests with both the Lee County and Bastrop County floodplain administrators. Although permits have been obtained from Lee County for the construction of certain structures, no overall authorization has been obtained to remove miles of streams completely as the result of proposed mining activities from the Lee County Administrator.

² Rene A. Barker, U.S. Geological Survey, Correspondence with Valarie Randall, ENSR International: Review of the "Brazos G" and Life-of-Mine Reports (March 25, 2002).

³ 44 Code of Federal Regulations §60.3 (2001); TNRC Publication No. RG-12, State of Texas Floodplain Administrators Manual, p. 33-34, 37, 48 (June 1994).

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76-10

Please see the response to general comment GW-2 in Section 4.5.4 of the Final EIS regarding the Dutton model.

The USACE coordinated and consulted with various agencies relative to groundwater data and analyses in preparing the Draft EIS. Please note that one purpose of a Draft EIS is to provide the public, including federal, state, and local agencies, the opportunity to provide input, including any relevant data, that is applicable to the issues addressed in the EIS.

Relative to the USGS and OSM review of the groundwater models used in the EIS, the USGS subsequently provided a follow-up letter indicating their initial concerns had been addressed adequately (USGS 2002).

76-11

Please see the response to general comment SW-4 in Section 4.5.5 of the Final EIS regarding the role of FEMA and the counties in floodplain management. Also see the response to comment 59-1. Further agency interactions have been conducted, and the text beginning on page 3.2-71 of the Final EIS has been revised in response to these comments.

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76-11

More disturbingly, no authorization of any kind has been requested from the Bastrop County floodplain administrator; nor has any authorization been received from Bastrop County for proposed construction and mining activities within floodways, high hazard flood areas or 100-year flood plains. And, according to FEMA-Region 6's response to a Neighbors' Freedom of Information Act ("FOIA") request, "We [FEMA] have reviewed our community files and other records and find no written communication about the proposed mine site. Furthermore, our floodplain management specialist for these counties recalls no telephone conversations with any party about the site."⁴ So any limited authorizations that may have been obtained from the Lee County floodplain administrator have apparently not been reviewed or approved by FEMA. Without beating a dead horse, Neighbors would remind the Corps that its own DEIS acknowledges that approximately 38 miles of streams and creeks will be removed completely and permanently as the result of Alcoa's proposed activities. Stream channel modifications of this scope and magnitude cannot help but affect regional flooding and the fact that neither Alcoa, the Corps nor OSM has coordinated these proposed surface mining activities in any fashion with FEMA raises a real concern about the overall coordination among these agencies in responding to Alcoa's proposed project.

76-12

As noted earlier, the Corps failed to review the actual provisions of relevant water contracts such as that between Alcoa and SAWS. Such review would have resulted in more accurate — and much higher — estimates regarding cumulative impacts of groundwater pumping. For example, the DEIS does not address, or even mention, the Groundwater Availability Model for the Central Carrizo-Wilcox Aquifer which is scheduled for completion by the Texas Water Development Board in January 2003. This GAM is the most ambitious, thorough investigation undertaken to date by any federal or state agency and takes into consideration a number of limits on the Carrizo-Wilcox that the Modified Region G Model (on which the DEIS relies) fails to include. The GAM is also the model that will be utilized by all the groundwater conservation districts in the impact area of this project, to develop management plans for preserving and protecting the resource. Before proceeding with a final EIS, the Corps of Engineers should wait until the Central Carrizo-Wilcox GAM is released by the Texas Water Development Board. Moreover, the TWDB's model should be used by the Corps in modeling the different scenarios in the DEIS since it is specifically designed to address these issues unlike the "Brazos G" report.

76-13

The Corps failed to consult with residents in the area to be impacted by Alcoa's plans, with citizens groups and community agencies knowledgeable about issues and potential impacts, or with relevant local government officials.

In addressing social and economic issues, the Corps did not take advantage of local knowledge and perspective for Bastrop and Lee Counties, but instead relied heavily on a report by an Alcoa consultant. Resources the Corps could have consulted, but did not, include: Neighbors for Neighbors; Bastrop Economic Development Corporation; Elgin Economic Development Corporation; local businesses, particularly banks and realty agencies; business associations, such as chambers of commerce and the Elgin Main Street Association; and city and county governments, which are engaged in decisions regarding tax incentives and other economic development strategies.

⁴ David Passey, Federal Emergency Management Agency, Correspondence with Michelle A. McFaddin re: pending FOIA request (September 5, 2002).

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76-12 Please see the response to general comment GW-1 in Section 4.5.4 regarding the use of the GAM.

76-13 Please see the response to general comment LU-1 in Section 4.5.9 of the Final EIS regarding sources of data and reliance on Alcoa data sources.

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76-14 In addressing transportation issues, the Corps did not consult with county officials, particularly in Bastrop County, where commissioners have undertaken a significant information-gathering effort regarding the potential impacts of Alcoa's proposed road changes. The Corps did not consult with area residents, who could have identified issues not readily apparent to those living elsewhere, such as potential impacts to Bastrop County Road 90. Nor did the Corps apparently consult with the Texas Department of Public Safety to obtain relevant accident statistics, or with Neighbors for Neighbors, which could have provided those statistics and other relevant information. Instead, the Corps relied, as usual, on a report prepared by an Alcoa consulting firm.

76-15 In addressing air quality issues, the Corps did not consult with the EPA or with relevant officials in Bastrop, Lee, Travis or Williamson Counties. If it had, the Corps would have learned that the Austin metropolitan region is grappling with the prospect of nonattainment of federal air quality standards in the immediate future, a fact that negates the DEIS's erroneous conclusion that there are no areas within 60 miles of the proposed project where air quality deterioration is not allowed. In fact, Alcoa's impact on air quality extends as far north as the Dallas-Fort Worth metroplex; a recent article in the *Fort Worth Star-Telegram* notes that that region, which also faces the threat of nonattainment, is affected by Alcoa's Rockdale smelting operation:

Pollution comes from the old Alcoa plant in Rockdale, which releases more NOx than all four counties combined [referring to Denton, Collin, Tarrant, and Dallas, the counties comprising the Metroplex]. Those emissions drift over Fort Worth-Dallas and contribute to its smog, according to the Texas Commission on Environmental Quality. (Star-Telegram, 10/13/02)

In every major section of the DEIS, similar shortcomings are noted. (Please see the individual sections for additional detail.)

The DEIS reflects excessive reliance on input from Alcoa and its paid consultants in the review and revision of the Preliminary Draft Environmental Impact Statement.

76-16 Alcoa's opportunities to influence the DEIS appear to extend well beyond specific fact-checking. A review of Alcoa's recommended edits to the PDEIS shows persistent — and often successful — efforts to substitute euphemistic terms, avoid damaging information, and otherwise mitigate statements that worked against Alcoa's preferred action. Neighbors would note that it obtained Alcoa's suggested revisions to the DEIS not from the USACE, which initially refused to disclose to Neighbors not only the March, 2002 PDEIS that was transmitted to Alcoa for comment but also Alcoa's comments, in response to our pending FOIA request, but instead from Alcoa through the discovery process in the RRC proceeding on Alcoa's pending surface mining and reclamation permit application. The Corps' initial refusal to disclose this information alerted Neighbors to the potential importance of Alcoa's requested changes. Upon review of the March, 2002 PDEIS and Alcoa's comments thereto, Neighbors was disheartened to find numerous examples of changes made only to appease Alcoa rather than for any technically supportable reason. Here, for example, are some of the word changes made at Alcoa's behest in revising the DEIS that was later provided to Neighbors and other interested parties in August, 2002:

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76-14 Please see the response to comment 76-13. Also see the response to general comment T-1 in Section 4.5.7 of the Final EIS regarding the effects of relocating County Road 90.

76-15 Please see the response to general comment AQ-1 in Section 4.5.6 of the Final EIS relative to cumulative impacts.

Potential future non-attainment designation for Austin, Dallas, or other surrounding areas for one or more criteria pollutants would not be a direct or cumulative effect of the Proposed Action since the future emissions from the proposed mine and the power plants would be less than current emissions in the region. Therefore, any finding that the air quality is worsening in the region would result from increases due to increases in air emissions from other existing sources or from new sources to be constructed in the region.

76-16 Please see the response to general comment NEPA-1 in Section 4.5.1 of the Final EIS relative to Alcoa's provision of baseline data. Relative to Alcoa's review of the Preliminary Draft EIS, Alcoa suggested revisions relative to the description of the Proposed Action; Alcoa also suggested revisions, based on their knowledge of the project area, relative to the description of the affected environment and potential impacts. All of the revisions to the Preliminary Draft and Draft EIS were based on USACE direction, rather than Alcoa comments. The USACE's direction relative to revisions included the removal of subjective adjectives describing impacts, as identified in the comment. Please see the response to general comment SE-2 in Section 4.5.10 of the Final EIS regarding data aggregation.

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- changing the term “groundwater drawdown” to “water level change” in numerous places (see especially sections 3.2 and 3.5) thereby minimizing the effect on groundwater availability;
- changing the term “worst-case” (referring to noise level scenarios) to “maximum” in several places (see section 3.12);
- changing the term “restrict” to “route” (referring to stream flow) (p. v);
- changing the term “would reduce” to “would alter” (referring to stream flow) (p. vi);
- deleting the term “massive” from the phrase “views of the massive draglines” (p. xv);
- changing the term “potentially reduced depressurization efficiency” to “potential slight reduction” (p. 2-14);
- deleting the term “substantially” from the sentence, “This would substantially reduce flow in the remaining downstream portions...” (p. 3.2-71);
- changing the term “adverse effects” to “impacts” (referring to air quality) (p. 3.8-22); and
- changing the term “would” to “could” (p. 2-30) or “are estimated” (p. 2-29).

76-16

Moreover, Alcoa’s proposed language modifications for inclusion in the DEIS that was eventually distributed to the public and to Neighbors went well beyond the bounds of providing or correcting facts. Compare the following paragraph regarding the “No Action Alternative” (Section 2.3) that was drafted by Alcoa as part of its review and recommendations regarding the PDEIS and the paragraph that the USACE subsequently inserted in the DEIS:

The No Action alternative does not mean that there would be no impacts to the lands in and near the Three Oaks Mine. The potential exists that Alcoa and CPS would retain the property and utilize or lease the lignite reserve at a later date, or that some portion of the land would be sold for purposes of development. Absent firm plans, the COE has chosen not to speculate on the nature of the future land use, and has not predicted these possible future impacts from the No Action alternative. Note also that with No Action, there would still be regional impacts that are caused by activities other than the Three Oaks Mine, and that are identified in the analyses of cumulative impacts; for example, aquifer drawdowns associated with regional pumping by entities other than Alcoa would be expected to occur. (Email attachment sent to J. Walker, USACE, by H. Kieschnick, Alcoa, as part of Alcoa’s recommended edits to the PDEIS)

The No Action Alternative does not mean, however, that there would be no impacts to the lands in and near the Three Oaks Mine. The potential exists that Alcoa and CPS would retain the property and utilize or lease the lignite reserve at a later date, or that some portion of the land would be sold for

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purposes of development. The USACE has chosen not to speculate on the nature of the future land use, and has not predicted these possible future impacts from the No Action Alternative. Also note that with No Action, there still would be regional impacts, as identified in the analyses of cumulative impacts, that are caused by activities other than the Three Oaks Mine; for example, aquifer drawdown associated with regional pumping by entities other than Alcoa. (DEIS, pp. 2-1, 2-4)

Except for incidental word changes — the addition of “however,” deletion of “absent firm plans,” transposition of “note also” to “also note,” change of “and that” to “as,” and deletion of “would be expected to occur” — these two passages are identical. The content of the passage is by no means incidental, however. It addresses (1) the Corps’ decision not to “speculate” on future land use, a topic of substantial concern to residents in the Three Oaks region; and (2) the highly dubious implication that “aquifer drawdown” (a phrase usually anathema to Alcoa, but apparently acceptable when blame can be attributed to others) is inevitable no matter what Alcoa does or does not do.

Of even greater concern are instances in which statements of concern or descriptions of negative impacts were changed or dropped from the PDEIS entirely. The greatest number of these language modifications relate to concerns about groundwater drawdowns — or, as Alcoa would have it, “declines in potentiometric surface” (p. iii) — a term that few laypeople would understand or comprehend. Here are a few examples:

- In the Summary, the PDEIS noted that the impacts of reduction or loss of available water could lead, among other things, to “possible long-term impacts to population numbers” among wildlife species (PDEIS, p. iv). This conclusion was deleted from the DEIS, even though the impact of “reduction in regional carrying capacity” was retained (pp. viii-ix), an impact that would carry with it inevitable population loss.
- In Section 2, the PDEIS included a “Resource/Impact Issue” related to groundwater that the USACE dropped completely from the DEIS. This issue, labeled “Changes in recharge to aquifers,” included the following statement: “Monitoring and mitigation of recharge impacts are not possible. This impact is an unavoidable impact that may last for approximately 40 to 100 years in the outcrop area of the Simsboro west of the Three Oaks Mine” (PDEIS, Table 2-16). Alcoa requested that the statement be struck and replaced with the statement, “Monitoring of the outcrop areas will be conducted.” Instead the paragraph was deleted.
- Also in Table 2-16, in the category, “Loss of waters of the U.S. including wetlands,” the PDEIS referred to “a permanent loss” of wetlands and U.S. waters. Alcoa objected and, not surprisingly, the DEIS states “temporarily would be impacted.”
- In the “Water Resources” section, the PDEIS included the statement, “The anticipated drawdown within the outcrop area could reach a maximum depth of up to 75 feet” (p. 3.2-52). Alcoa objected; the statement was replaced in the DEIS by, “The anticipated drawdown within the outcrop area could reach a depth of 10 feet within the 10-foot drawdown area of the Simsboro outcrop” (p. 3.2-103).

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- Also in the “Water Resources” section, the PDEIS included the following statement regarding reduced stream flow: “The amount of these decreases at [monitoring station] LBS near McDade may be on the order of the 12 to 16 percent represented by the evaporation losses or watershed changes. It is possible that any perennial pools that exist along this reach may go dry under low-to-average flow conditions. Because of this potential impact, additional monitoring and mitigation... are recommended” (p. 3.2-43). Alcoa objected; the DEIS dropped the recommendation for mitigation, as well as the upper limit regarding the magnitude of loss, stating only: “At most, the average amount of these decreases at LBS near McDade may be on the order of the 12 percent represented by the evaporation losses” (p. 3.2-74). In a subsequent paragraph, Alcoa objected to a PDEIS statement regarding reduction in flow along Middle Yegua Creek; again, the DEIS dropped the upper limit of magnitude.

There are also significant changes between monitoring and mitigation recommendations included in the PDEIS and those contained in the DEIS. In some instances, NFN has written documentation of Alcoa’s objections to the PDEIS measures; other changes, perhaps, were worked out in the three-day review session involving USACE, ENSR, Alcoa staff, and Alcoa consultants that was held at ENSR’s Colorado headquarters in May 2002. Significant changes include the following:

- The PDEIS included a groundwater monitoring and mitigation measure addressing “Operational Well Monitoring” that is substantially different from the measure included in the DEIS. The PDEIS stated: “Alcoa would monitor all private and municipal wells within the mine-related 20-foot drawdown contour of the Simsboro and Calvert Bluff Formations until the Year 2050. As required by the RRC [Railroad Commission] and following the guidelines of the RRC, Alcoa would ensure that any wells affected by drawdown due to mine-related pumpage at the Three Oaks Mine would continue to supply water at their pre-mining rates” (PDEIS, p. 3.2-94). The DEIS provision “under consideration” by the USACE addresses monitoring only, using a limited set of monitoring wells.

- The PDEIS included two surface water monitoring and mitigation provisions that have disappeared entirely from the DEIS. The first related to “Baseline Stream Monitoring” in order to ascertain and monitor the “pre-mining existence” of perennial pools on Big Sandy and Middle Yegua Creeks. The second addressed “Post-mining Monitoring and Mitigation” related to the perennial pools identified via the “Baseline Stream Monitoring” (PDEIS, p. 3.2-94).

- Three monitoring and mitigation measures related to “Fish and Wildlife Resources” were dropped from the DEIS, including measures aimed at “Migratory Bird Protection,” “Timber/Canebrake Rattlesnake Protection,” and “Loggerhead Shrike Protection” (PDEIS, p. 3.5-37). All three of these measures would have required Alcoa to initiate immediate protective measures if indications of active nesting were observed, or if a timber rattlesnake was observed on the mine site.

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- A requirement for “Particulate Monitoring” related to air quality was dropped from the DEIS. The provision required Alcoa to “monitor PM₁₀ and TSP at selected locations” (p. 3.8-21).

76-16 Of all the businesses, organizations, governmental entities, and individuals that have a stake in the outcome of the Corps’ environmental assessment and permitting process, *only Alcoa was given the opportunity to participate in drafting, editing, and revising the text of the Environmental Impact Statement.* Given Alcoa’s obvious self-interest, this excessive and unbalanced access cannot be justified.

3. Inconsistencies suggesting bias in favor of “Alcoa’s preferred alternative”

76-17 **Overview.** The DEIS is consistent in its inconsistency. Variability in the DEIS’s level of detail, inconsistencies regarding the scope of issues addressed and the areas where the Corps is or is not willing to speculate as well as selective attention regarding Alcoa’s claims and assertions — whether by accident or design, all of these are angled to Alcoa’s benefit. The Corps needs to revisit every section of the DEIS and to take an even-handed approach to its exploration of the critical issues related to Alcoa’s plans and their impacts.

The DEIS reflects choices regarding the scope of information and level of detail that appear to arbitrarily and capriciously skew the results in favor of the “Proposed Action.”

76-18 The DEIS shifts its perspective from close-up to wide-angle lens when the details are not convenient to Alcoa — for example, mentioning “reasonably steady population growth” (p. 2-66) without noting that Bastrop County is now the 30th fastest growing county in the entire nation. The DEIS organizes information to Alcoa’s benefit, such as lumping together Bastrop, Lee and Milam counties and calling them a “regional economy” (p. 3.10-12). Texas Utilities is lumped with Alcoa’s power stations when convenient, otherwise forgotten. The identified “study area” for considering land use and recreation is confined to the proposed mine permit area and a variable 2-to-5 mile range beyond the permit boundary (p. 3.9-1), allowing the DEIS to ignore many relevant factors (including the City of Elgin, the community closest to the proposed permit boundary). In contrast, the identified “study area” for considering economic impacts is a 20-mile radius surrounding the permit boundary, a radius that conveniently encompasses Milam County as well as Lee and Bastrop Counties, where the proposed mine would be located (p. 3.10-1).

76-19 The DEIS also reflects decisions convenient for Alcoa regarding what information to include and what to exclude. Alcoa’s Rockdale smelting operation is included on the positive side of the balance sheet; in fact, it is the major consideration for justifying approval of Alcoa’s plans (p. 1-7). Yet the DEIS largely *excludes* consideration of air quality and other impacts from the smelting operation on the negative side of the balance sheet. The Corps declines to “speculate” on potential land use if Three Oaks is not approved (p. 2-1), conveniently sidestepping a complete economic analysis of a “no strip-mine” scenario. Consideration of the cumulative effects of Alcoa’s water pumping plans is similarly restricted. Yet the Corps is perfectly willing to speculate that Alcoa’s power plant units would continue to operate even if the smelter were to close (p. 2-4) —despite the existence of other, equally credible options.

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76-17 The descriptions of the affected environment, including definition of the study area and the level of detail, were based on available information and the assessment of the appropriate scope for each resource relative to NEPA and the CEQ guidelines. Relative to inconsistencies identified in comments on the Draft EIS, the USACE has addressed these inconsistencies in the Final EIS.

76-18 Please see the response to general comment SE-2 in Section 4.5.10 of the Final EIS relative to presentation of aggregated data. Also see the response to general comment LU-1 in Section 4.5.9 of the Final EIS addressing local land use plans and planning jurisdictions.

76-19 The existing Rockdale smelter is part of the Purpose and Need for the Proposed Action, as discussed in Section 1.2 of the Draft EIS. Please see No Action Alternative discussions for all resources in Chapter 3.0 of the Draft EIS text for analyses of the no strip-mine scenario.

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76-20 In some cases, the DEIS shifts the unit of analysis; whether intentional or accidental, the effect is inevitably to Alcoa's benefit. For example, in general the DEIS uses 7 million tons as the projected annual output for the proposed Three Oaks Mine. However, in reporting air quality impacts from mining activities, the DEIS uses an annual production rate of 6.2 million tons (Table 3.8-8, p. 3.8-12), resulting in an under-report of annual air emissions. Similar inconsistencies may be found regarding the heat content of lignite, the life-of-mine, and other factors.

The DEIS reflects apparently arbitrary choices regarding which of Alcoa's claims to believe and which to disregard.

76-21 As noted earlier, the Corps has been selective in its attention to Alcoa's unsubstantiated promises and threats. The DEIS notes that Alcoa is planning to cut its air pollution at the Rockdale complex (p. 1-6) — ignoring Alcoa's stated option of shutting down its power plant units instead. The DEIS takes seriously Alcoa's threat that the smelter will close if the new strip mine is not permitted (p. 2-4), yet ignores similar, documented threats that the smelter may close for other, unrelated reasons. Another glaring example of how the DEIS erroneously takes Alcoa's claims at face value is reflected in the DEIS's echo of Alcoa's statement that the use of mobile equipment ("truck/shovel mining") instead of draglines would be cost-prohibitive for the company (see Table 2-1). The DEIS states this method of mining was removed from consideration because "identified advantages would not offset the economic disadvantages" (p. 2-3). However, the mining permit granted Alcoa in September by the RRC states that the company intends to use truck/shovel mining, either alone or in conjunction with the use of draglines. This is because the "alternate mine plan" approved by the RRC allows mining only on a limited basis, in restricted areas, and for only three years, unless Alcoa obtains approval for the roads changes it wants. In implementing the restricted "alternate mine plan," Alcoa would have to rely on truck/shovel mining, rather than draglines, according to the permit.

4. Flaws in characterizing the "Project Setting" (Summary, Section 1.1)

The DEIS incorrectly portrays the Three Oaks Mine region as comparable in character to Alcoa's current Sandow Mine region, failing to address critical differences in the two locations and the implications of those differences for impacts on the Three Oaks region.

76-22 The Corps of Engineers has adopted Alcoa's specious argument that there are no significant differences between the region of its proposed Three Oaks strip mine and its current Sandow mine. No one with a thorough knowledge of this area could reasonably trivialize the issue of the proposed location, as this Draft Environmental Impact Statement does. In the Summary, the DEIS mentions location as a mere aside:

The primary difference between the proposed Three Oaks Mine and the existing Sandow Mine, aside from the location, is that substantially less groundwater would be pumped for the proposed Three Oaks Mine. (p. ii)

76-23 Location is, in fact, one of *the* major issues regarding Alcoa's proposed plans. Even the map included in the DEIS (p. 1-2) is inaccurate. The map incorrectly shows the location of both the eastern edge of Austin's city limits and the municipal boundaries of the City of Elgin; both the

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76-20 Dispersion modeling results for a lignite production of 7.0 million tons per year have been added on page 3.8-17 of the Final EIS.

76-21 Please see the response to comment 76-2 regarding possible closure of the smelter. Alcoa's alternate mine plan is described in Section 2.7 of the Final EIS; please also see Section 4.5.2, Alternatives Issues. In their evaluation of alternate mining methods, Alcoa rejected shovel/truck mining as an exclusive means of mining but included limited use of this method as part of the Proposed Action (please see Section 2.5.2.6 of the Draft EIS). Thus, inclusion of shovel/truck mining in the alternate mine plan is not new, and impacts associated with this method have been assessed in this EIS as part of the Proposed Action.

76-22 Where applicable, such as in the discussions of groundwater, surface water, social and economic values, etc., the Draft EIS distinguishes between the two locations.

76-23 The map reflects locations and boundaries identified by the Texas General Land Office (www.glo.state.tx.us) at the time of Draft EIS preparation.

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76-23 Austin and Elgin city limits extend significantly further east (i.e., toward the mine site) than is indicated on the map. Even more significantly, the DEIS ignores or discounts a number of critical differences between the location of Alcoa's current Sandow strip mine and the proposed Three Oaks strip mine, including the following:

- The City of Elgin and its historic downtown district are located only 5 miles from the proposed Three Oaks site. Elgin, the largest community in Bastrop County, has been designated as a "National Main Street City" (*Bastrop Advertiser*, 12/15/01). The downtown historic district is listed in the National Register of Historic Places.
- The Three Oaks permit area is barely 20 miles east of the Austin city limits.
- Bastrop County is a part of Austin's five-county Standard Metropolitan Statistical Area (SMSA), a fact the DEIS fails to acknowledge.
- Austin has officially designated the areas east of the city as a "smart growth" corridor.
- Alcoa's Sandow mine is located primarily in Milam County, whose mono-economy has been — to quote the *Rockdale Reporter* — "stuck in low gear" for years. Three Oaks would be located in Lee and Bastrop counties, whose economies are far more diversified and much more strongly linked to the Austin economy.

76-24 Bastrop County, whose population is greater than that of Milam and Lee counties combined, is experiencing burgeoning growth. With population increases far exceeding the state average and accelerating annually, Bastrop County is now the 30th fastest-growing county in the United States.

- Bastrop County has pinned its economic future on activities that are antithetical to a massive strip-mining operation such as Alcoa's. Contrary to statements in the DEIS, the city of Elgin *does* have a land use plan that focuses specifically on attracting high-tech industrial development and absorbing more growth from Austin. Bastrop County Judge Ronnie McDonald has informed the Texas Railroad Commission that, "Bastrop County has engaged in an effort to guide the County's rapid growth... It is my view that Alcoa's proposed lignite strip mining is incompatible with our planning goals" (see RRC unsuitability proceedings, 2000-2001).

Perhaps if the Corps had not relied so heavily on the work of Alcoa consultants for its information, these facts and others would be reflected in the DEIS. (See also the comments regarding "Social and Economic Values" for additional information related to this topic.)

5. Failure to address all "Alternatives Available to the USACE" (Sections 2.2, 2.3, 2.7)

76-25 *The DEIS fails to propose and examine alternatives to the proposed mine plan that would allow the mine to be developed, while proposing changes that would lessen the impacts to waters of the United States.*

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76-24 Comments noted. Please see the response to general comment SE-2 in Section 4.5.10 of the Final EIS relative to presentation of aggregated data. Also see the response to general comment LU-1 in Section 4.5.9 of the Final EIS addressing local land use plans and planning jurisdictions. The Draft EIS (Section 3.9.1.1) acknowledges the existence of municipal land use plans, but correctly notes that none have jurisdiction over the mine permit area.

76-25 The commenter asserts that the Draft EIS has failed to address an evaluation of alternatives that would allow mine development with fewer aquatic resource impacts than those identified in the Proposed Action. Section 2.4.2 of the Draft EIS identifies several mine layout and sequencing alternatives that were evaluated but not carried through the detailed analysis due to technological or economic considerations. Further, it should be noted that unlike many types of projects that may be readily redesigned to avoid impacting all or some waters of the U.S., projects that involve the recovery of a natural resource have two main constraints that dictate the location and extent of earth disturbance. These constraints, which limit the applicant's ability to avoid impacts, include the specific location of the natural resource being sought and the large expanses of land required for staging, stockpile areas, surface water control facilities, transportation corridors, and other activities. These factors in combination with the location and geographic extent of waters of the U.S., which in this case traverse large expanses of uplands throughout the site, severely limit the consideration of alternative mine layouts that would further reduce impacts to waters of the U.S.

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The purpose of the National Environmental Policy Act is to require agencies to consider environmentally significant aspects of proposed actions, and in so doing, to let the public know that the agencies' decision making processes include environmental concerns. *Baltimore Gas & Elec. Co. v. Natural Resources Defense Council*, 462 U.S. 87, 97 (1983). For projects such as the Three Oaks Mine, federal permitting approvals must be preceded by an Environmental Impact Statement ("EIS"). The consideration of alternatives to the project as defined by its proponents is the heart of the EIS, itself. 40 CFR § 1502.14. Under Corps of Engineers regulations, a Clean Water Act § 404 permit to discharge fill material into jurisdictional waters may not be issued, if:

- (i) There is a practicable alternative to the proposed discharge that would have less adverse effect on the aquatic ecosystem, so long as such alternative does not have other significant adverse environmental consequences; or
- (ii) The proposed discharge will result in significant degradation of the aquatic ecosystem under § 230.10(b) or (c); or
- (iii) The proposed discharge does not include all appropriate and practicable measures to minimize potential harm to the aquatic ecosystem; or
- (iv) There does not exist sufficient information to make a reasonable judgment as to whether the proposed discharge will comply with these Guidelines.

76-25 *See* 40 CFR § 230.12(a)(3). The alternatives considered in the draft EIS fail to include alternatives that allow the mine to be developed, but that honor the requirements of (i) and (iii) above. This is a fatal shortcoming of the DEIS.

Wetlands are among the most productive ecosystems in the world, comparable to rainforests and coral reefs, and have a unique value to our society. Wetlands store carbon within the plant and soil biomass that helps moderate global climate conditions, they act as natural filters, absorbing pollutants before they enter rivers, lakes, and streams, and they also reduce floodwaters downstream. Despite the fact that wetlands are a valuable resource, a 1997 U.S. Fish and Wildlife Service survey reported that roughly 58,500 acres of wetlands are being destroyed annually. Wetlands play an integral role in the ecology of the watershed. The combination of shallow water, high nutrients, and high levels of primary production are ideal for the development of organisms that form the base of the food web allowing an immense variety of species to inhabit wetlands.

Alcoa's preferred alternative would directly impact 67.4 acres of waters of the US that include streams, ponds and wetlands. About an equal number of jurisdictional acreage would be indirectly affected. DEIS, p. vi. These § 404-protected areas would be removed or, at least, compromised, thereby injuring the natural course of waters and wetlands and disrupting a fragile ecosystem. The draft EIS proposed alternatives include the preferred alternative, no action, and various other alternatives that do not include alternatives to the method of mining within the general Three Oaks site. Only the preferred alternative and the no action alternative were actually analyzed in any detail. In determining the scope of alternatives to be considered, the emphasis is on what is "reasonable" rather than on whether the proponent or applicant likes or, even, is itself capable of carrying out. 46 Fed. Reg. 18026, 18027 (Mar. 23, 1981), CEQ's "Forty Most Asked Questions"

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The commenter has raised an additional concern that the Draft EIS fails to consider alternatives that would include all appropriate and practicable measures to minimize potential harm to the aquatic ecosystem. A number of environmental protection measures relative to aquatic resource impacts, water quality, and other resource effects have been proposed by the applicant. These measures, developed to minimize potential harm to aquatic ecosystems, were identified in Table 2-15 of the Draft EIS. The USACE also has identified a number of additional potential aquatic resource and water quality monitoring and mitigation measures that would further minimize adverse impacts to aquatic resources. These measures also were included in Table 2-15 of the Draft EIS. In response to public comment and through further evaluation, the USACE has identified several new and revised mitigation measures in the Final EIS; please refer to the revised Table 2-15 in the Final EIS for summaries of these additional measures. In response, the applicant has revised the Mitigation Plan to address issues that have arisen through the NEPA process. Please see the revised Mitigation Plan (in Appendix E of the Final EIS) for an overall description of the mitigation proposed relative to restoration, enhancement, and preservation of waters of the U.S. and associated riparian buffers.

The commenter also suggests that the Proposed Action would result in significant degradation of the aquatic environment. The USACE has extensively evaluated the effects of the Proposed Action on the aquatic environment and has determined that with the inclusion of the environmental protection measures proposed by the applicant, in addition to the revised Mitigation Plan and the added monitoring and mitigation measures identified by USACE during the NEPA process, the proposed project would not result in significant adverse effects to the aquatic environment. Please see Sections 3.2.4 and 3.2.5 of the Final EIS and Section 3.0 of Appendix A of the Draft EIS.

The commenter presents a summary pertaining to wetlands, wetland functions, and trends of resource loss; comment noted. The USACE recognizes the important role wetlands play in maintaining the ecological balance of aquatic ecosystems. However, in this region of central Texas, wetlands located on ephemeral or intermittent streams are not typical features of the natural landscape. The USACE has evaluated the 5.3 acres of emergent wetlands, most of which are associated with on-channel stockponds or man-made drainage alterations, located within the 8,648-acre proposed area of disturbance. Such wetlands within these watersheds are artifacts of human disturbance and are not unique or highly functional aquatic resources, as the commenter suggests. Please see Section 3.2.5.1 of the Draft EIS for a description of these areas. Further the USACE has extensively evaluated the effects of the Proposed Action on all elements of the aquatic environment. Please see Sections 3.2.4 and 3.2.5 of the Final EIS relative to potential impacts.

The commenter asserts that the Draft EIS fails to identify the location of the 67.4 acres of waters of the U.S. that would be directly impacted and the 73.5 acres of waters of the U.S. that could be indirectly impacted as a result of mine-associated groundwater withdrawal within the Simsboro outcrop. Please see Figure 3.2-25 of the Draft EIS for specific locations of waters of U.S. within the proposed area of disturbance and Section 3.2.5.2 of the Final EIS for a description of the proposed impacts. Relative to indirect impacts, precise delineations of waters of the U.S. located within the potential Simsboro 10-foot drawdown area could not be performed due to lack of access. However, through the evaluation of aerial photography, in addition to limited field verification in selected locations, the USACE has estimated that approximately 73.5 acres of waters of the U.S. exist within the potential Simsboro 10-foot drawdown area.

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The DEIS is legally inadequate in its explanation of the data sources on which it relies for its “alternatives” conclusions. While an EIS may, even should, incorporate by reference other studies that explain the statements it makes, the incorporated material needs to be clearly cited in the EIS and its content — at least, insofar as relevant to the development of the EIS — briefly described there. The material incorporated by reference needs to be readily identifiable and reasonably available for inspection by potentially interested persons. See 40 CFR §1502.21 (Incorporation by reference).

That standard has plainly not been met for the discussion in the Three Oaks DEIS of impacts to jurisdictional waters of the U.S. Those impacts to these areas are the single most relevant impacts for commenters concerned about preservation of jurisdictional waters, and it is preservation of jurisdictional waters that gives rise to the entire NEPA process, in this instance. The DEIS not at all clear as to which wetlands, springs, streams, etc. constitute either the directly-impacted 67.4 acres or the similar number of indirectly-impacted acres. This information is not explicit in the DEIS text, and the source of the information, if that source exists elsewhere, is not clearly cited or summarized in the text.

Because of the DEIS’s deficiency in identifying the affected wetlands, etc., it is not possible for commenters to offer very detailed suggestions for alternatives that would allow mining at Three Oaks, but allow mining with lessened impacts to jurisdictional waters. That said, an alternative or series of alternatives with characteristics along the lines of the following should have been analyzed:

- 50-foot or other appropriate-width buffer around the waters of the US in the mining area or, at least, around areas identified by the Corps of Engineers as wetlands;
- use of bridges over stream beds, rather than the construction of haul roads through stream beds;
- County and State roads could be used in place of building the new haul road;
- Constructing the haul road just 400 ft. to the south of the currently-proposed location; this would protect additional wetlands and stream areas;
- Section A of the mine plan could be located 1.5 miles to the south of the proposed location, which relocation would still in the permitted area and would preserve three areas of wetlands and most of Willow Creek; and
- Beginning the mining operation to the south of FM 696, thereby eliminating the need for rerouting and, therefore, reducing the amount of direct impacts to waters of the US.

In summary, regarding impacts to jurisdictional waters, the DEIS is (1) legally deficient for its failure to identify the jurisdictional waters that would be affected; and (2) arbitrary and capricious in its rejection from any consideration at all of alternatives, along the lines just outlined, that would actually address the Corps’ § 404 regulations (40 CFR 230.12(a)(3), above); and, still, allow the mining of the Three Oaks site. In this last respect, the situation at hand is analogous to that which, among other failings, led to the EIS invalidation in *Muckleshoot Indian Tribe v. United States Forest Serv.*, 177 F.3d 800 (9th Cir. 1999)(Forest Service failure to consider deed restrictions among its EIS alternatives, though deed restrictions were consistent with the Service’s basic policies).

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Part of this acreage is composed of ephemeral streams, wetlands, and ponds that do not receive groundwater contribution and would therefore be unaffected by any potential drawdown. The remaining intermittent streams, wetlands, and ponds may be affected depending on their hydrologic source. Please see Figure 3.2-22 of the Draft EIS for a depiction of gaining reaches of stream within the potential Simsboro 10-foot drawdown area. The USACE has analyzed this potential impact and has made a reasonable effort to assess the direct and indirect effects of the Proposed Action; see Sections 3.2.3, 3.2.4, and 3.2.5 of the Draft and Final EIS. Please also see Table 2-15 of the Final EIS that describes monitoring and mitigation to address indirect impacts that could occur as a result of mine-associated groundwater withdrawal.

As indicated above, a number of alternatives were described in Sections 2.4.1 and 2.4.2 of the Draft EIS. Because these alternatives did not meet the standard of what is reasonable on the basis of technical and economic practicability pursuant to 40 CFR 1502.14, they were eliminated from the detailed evaluation, and the reasons for their elimination were discussed. Upon completing the evaluation of alternatives to be carried through the detailed analysis, the No Action Alternative and Proposed Action were the only alternatives that met the standard for “reasonable” alternatives as set forth in 40 CFR 1502.14. As such, those were the only alternatives analyzed in detail. Please also see the discussion of the EIS alternatives analysis presented in Letter 17 from the USEPA.

Further, the commenter presents several derivations of the mine layout and sequencing alternative evaluated in Section 2.4.2.1 of the Draft EIS. Pursuant to CEQ’s “Forty Most Asked Questions,” in circumstances when there exists an infinite number of possible reasonable alternatives, only a reasonable number of examples that cover the full spectrum of alternatives must be analyzed and compared in the EIS. In this case, because the varied mine layout and sequencing alternative did not meet the standard of reasonableness pursuant to 40 CFR 1502.14, it was not carried through the detailed analysis.

76-25

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6. Flaws in analyzing “Alternatives Available to Alcoa” (Section 2.4)

Overview. The most important topic addressed in Section 2.4 of the DEIS (“Alternatives Available to Alcoa”) is that of alternative fuel sources. However, the Corps has poorly assessed comparative fuel costs; the DEIS’s analysis contains inconsistencies, errors of fact, unsupported assumptions, and omissions — all of which artificially skew the DEIS’s conclusions in favor of Alcoa’s “preferred action.” For example, the DEIS fails to document, clearly and comprehensively, the basis for 1) accepting \$1.25/MmBTU as the competitive threshold for Alcoa-Rockdale’s delivered fuel costs; 2) the specific factors included in calculating “delivered costs” for Three Oaks lignite, western coal, and natural gas; 3) independent and detailed cost information for western coal and natural gas; 4) comparative capital costs for each fuel alternative; and 5) the environmental and human health costs as well as direct economic costs and benefits related to each fuel source. The DEIS also fails to provide a thorough exploration of Alcoa’s contractual commitments and options, both with Texas Utilities and with San Antonio’s City Public Service, that may influence the costs and demand for lignite or alternative fuels. The Corps needs to begin again in its comparison of fuel costs and to collect and present data in a manner that allows a full, coherent cost comparison.

The DEIS fails to thoroughly assess Alcoa’s assertions regarding fuel costs and the company’s cost threshold for the purchase of fuel.

76-26 Neither Alcoa nor the DEIS specifies what cost categories are included in the “delivered cost” of lignite, nor what assumptions are made in calculating costs. For example, in stating — without providing specific supporting documentation — that Three Oaks lignite can be mined at a cost of \$.95/MmBTU, is Alcoa assuming that the poor quality lignite seams identified within the Three Oaks mine block can be blended successfully with higher quality lignite (a thus far untested assumption)? Is Alcoa incorporating all costs for drying and processing the lignite, including electrical power usage, and for handling and disposing of coal combustion wastes? Is Alcoa including the fees that have been paid to San Antonio’s City Public Service over the past three years? Is Alcoa offsetting some costs with projected or current income from its water marketing deals? Is Alcoa calculating costs based on its “alternate mine plan” as permitted by the RRC, or based on its earlier mine plan, which depends on road approvals that have not been forthcoming? What capital costs are involved in mining and burning Three Oaks lignite? Are those capital costs included in the \$.95/MmBTU estimate? How do those compare to capital costs related to alternative fuel use?

The DEIS also fails to substantiate the basis for Alcoa’s stated cost threshold of \$1.25/MmBTU. The only source document (included under the citation, Hodges, 2001) directly addressing this topic appears to be an e-mail exchange between an Alcoa representative and a representative from ENSR (the consulting firm engaged to prepare the EIS):

[Question from the ENSR representative:] Estimated threshold level of fuel cost to sustain competitive production of aluminum at the smelter. Based on the graph in Tommy [Hodges]’s road show, this is depicted as a range with an apparent upper limit of “approximately \$1.50/MMBtu.” Is this a quotable number or would you prefer a different value?

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76-26 Please see the response to general comment Alternatives-1 in Section 4.5.2 of the Final EIS regarding the overall cost comparisons among fuel alternatives. The USACE accepted Alcoa’s stated fuel cost threshold of \$1.25 per MMBTU as being reasonable and has no plans to conduct an economic audit of the Rockdale operations to verify this number. Likewise, the USACE accepted Alcoa’s stated estimate of production costs associated with the Three Oaks Mine lignite of \$0.95 per MMBTU as being reasonable relative to other known data points. Alcoa has stated that the \$1.25 threshold is based on projected future aluminum prices and the energy cost segment of making the aluminum. The \$0.95 cost was determined by applying Alcoa’s historic operating costs at the Sandow Mine to the specific volumes, tonnages, and distances associated with the Three Oaks Mine. Please also see the response to comment 33-6 relative to the use of grid power for operating the smelter.

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[Full relevant response from the Alcoa representative:] for the smelter to remain viable use \$1.25

As noted above, the DEIS needs to make an independent assessment of factors relating to Alcoa-Rockdale's cost threshold. This assessment needs to include detailed information, gathered from independent sources, regarding long-term trends in the price of aluminum in the world market. It is commonly acknowledged, by Alcoa as well as by market experts, that demand for aluminum is cyclical, and that the current "down" cycle will not last (see Reuters, 10/1/02, for Alcoa's own perspective on the market cycle). In fact, Alcoa boasted massive, unprecedented total profits and overall revenues for the three-year period of 1999-2001. It is inappropriate to look only at the current or short-term market outlook.

In addition, the DEIS needs to seek information from Alcoa-Rockdale regarding recent and/or projected reductions in its operating and administrative costs resulting from corporate cost-cutting initiatives. At the corporate level, Alcoa has initiated major programs, including a centralized purchasing system (*CRM Assist*, 9/11/02) and establishment of common application platforms (*Baseline*, October 2002). According to Alcoa representatives, many of the major benefits of these efforts are likely to be felt within the next year.

In describing comparative fuel costs, the DEIS presents information that is inconsistent, misleading, and confusing, rendering impossible any full, coherent cost comparison.

76-26

The DEIS is inconsistent in its figures regarding the heat content of Three Oaks lignite, a significant problem in trying to compare costs. On page 3.1-12, the DEIS notes that Three Oaks lignite has a heat content of 6,100 BTU/lb. Yet in comparing the costs of lignite with that of western coal (Table 2-2), the DEIS uses a heat content of 6,585 BTU/lb., an 8 percent advantage. At the same time the DEIS appears to *underestimate* the heat content of western coal, noting on page 2-8 that approximately 5 million tons of western coal per year would be needed to match current fuel supplies for the four power generating units in Rockdale (i.e., an annual average of approximately 6.2 million tons of Sandow lignite). In fact, that is an overestimate of 10 to 12 percent, given a heat value for Powder River Basin (PRB) coal ranging from 8,345 to 8,890 BTU/lb (USBLM, 2002). This inaccuracy is multiplied if one factors in the possibility, outlined in the DEIS, that Alcoa would be unable to successfully blend lower-quality Three Oaks lignite with higher-quality lignite, and would be forced to abandon the lower-quality lignite as spoil (p. 2-19).

In comparing costs of Three Oaks lignite with alternative fuels, the DEIS reproduces a table published by Railroad Commission staff as part of a staff report related to the unsuitability proceedings for the Three Oaks region (DEIS Table 2-2). However, the information in this table only serves to confuse the issue. As noted above, this table uses an inflated heating value for Three Oaks lignite. In addition, the table indicates a Three Oaks life-of-mine production of more than 262 million tons of lignite, whereas the DEIS elsewhere describes a total life-of-mine production of approximately 175 million tons (Table 2-6). As a footnote to the RRC table, the DEIS notes that Alcoa's current mine plan specifies a "slightly smaller mine block than addressed in the table" — but fails to note the resulting discrepancy of some 87 million tons of lignite.

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In citing information from the RRC table, the DEIS also quotes the RRC staff's conclusion that "[T]hese data all serve to show that, where satisfactory lignite thickness and volume exist, Texas lignite remains, in terms of equivalent unit energy needs, the most cost-effective option over western coal and natural gas within the State" (pp. 2-5, 2-7). However, the DEIS neglects to reproduce the next sentence in the RRC staff's report: "This fact continues to remain true particularly in those areas of the State where coal-fired mine-mouth power plants are already established and a significant portion of the capital costs have already been amortized" (Walter and Blair, 2000, p. 4). In the case of Three Oaks and Alcoa's Rockdale Operations, there do exist (almost, i.e., within about 20 miles) mine-mouth power plants. However, it is *not* the case that "a significant portion of the capital costs have already been amortized." As discussed elsewhere in these comments, unless the company chooses to shut down its three aging power plant units, Alcoa is facing capital costs of up to \$350 million to bring the units into compliance with current emissions standards *and* to meet the requirements of either a federal enforcement action or negotiated settlement resulting from decades of noncompliance with federal Clean Air Act provisions. Texas Utilities' power plant unit also is having to make significant capital investments to comply with changes in emissions standards accompanying state legislation deregulating the utilities industry (*Rockdale Reporter*, 10/3/02).

76-26 The DEIS further omits the RRC staff's caveat that its cost estimates "are gross calculations based on limited information" (Walter and Blair, p. 3). Nor does the DEIS report the RRC staff's notation that the cost estimates do not include additional economic factors, including "costs of any increased health effects, if any, due to possible environmental changes" and "costs of added infrastructural requirements" (Walter and Blair, p. 5). In describing comparative costs for PRB coal, the DEIS uses an estimated cost of \$1.49/MmBTU. However, DEIS source materials obtained by Neighbors for Neighbors (Hodges, 2001) include documentation of a half-dozen Texas power plants with delivered costs of western coal below Alcoa's stated threshold of \$1.25/MmBTU, and several others with delivered costs below Alcoa's *previously* stated threshold of \$1.50/MmBTU. Other evidence confirms that power plants in Texas regularly obtain PRB coal for less than \$1.25/MmBTU (for example, see *The Bidding Guide*, October 30, 2000 for information regarding Texas Utilities' purchase costs for PRB coal).

The DEIS describes costs for natural gas as being well beyond Alcoa's cost threshold. Yet the tax valuations for Alcoa's Rockdale holdings were recently downgraded due to the comparative cost advantage of natural gas. The DEIS also cites the need for capital expenditures of approximately \$100 million associated with a switch to natural gas (p. 2-9). However, the options Alcoa is considering for necessary emissions reductions to its three power plant units — reductions that would be accomplished automatically by the switch to natural gas — involve potential capital expenditures of up to \$350 million.

The DEIS details every possible cost that may be involved in switching to western coal or natural gas and yet it presents *no* specific cost savings figures for such things as:

- the acknowledged 30 to 40 percent reduction in ash disposal required for western coal and the 100 percent reduction for natural gas (p. 2-8);
- the savings in operations and maintenance costs related to the use of lignite dryers; and

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- the substantial savings in electrical power generation by the elimination of miles of power cables, two electrically powered draglines, conveyor systems, well pumps, and other mining equipment.

There are also problems with the substantial capital costs listed in the DEIS as necessarily associated with switching from lignite to western coal. As noted earlier, unless it elects to shut down its three power plant units, Alcoa will have to make massive capital expenditures for them anyway. In fact the scenario apparently assumed by the DEIS is that these boilers will be torn down and replaced with new fluidized bed systems — a “clean coal technology” as described by Alcoa’s mine manager, Tommy Hodges (2001). If Alcoa were to adopt this option, the only capital expenditures required for western coal would be the estimated \$13 million needed for unloading and handling facilities (Hodges, 2001).

76-26

The DEIS also fails to address potential capital expenditures that Alcoa may face in implementing the Three Oaks mining plan. These include the construction of a conveyor system for transporting the lignite some 20 miles from the mine site to the Rockdale facility and a \$40 to \$45 million investment (as estimated in the DEIS, p. 2-13) in mobile mining equipment. The DEIS notes Alcoa’s intent to use its two existing draglines to mine Three Oaks lignite; however, the “alternative mine plan” permitted by the RRC (September 2002) may require the use of a truck/shovel operation for at least the first three years of mining. The DEIS also states that Alcoa would have to make capital investments in order to obtain electric power from the grid (p. 2-8). Yet Texas Utilities recently announced a shutdown for the purpose of modifying its Sandow power plant; in the interim, the notice stated, Alcoa will be obtaining replacement power from the grid (*Rockdale Reporter*, 10/3/02).

The DEIS fails to address social and environmental costs related to the use of lignite or alternative fuel sources.

Nowhere in the DEIS does the Corps acknowledge that significant environmental and social costs — costs that can be measured in dollars as well as in terms of human health, mortality, and environmental indicators (Clean Air Task Force, 2000) — are attached to the use of specific fuel sources. Lignite, as the dirtiest of coals, is by far the most expensive fuel when measured by these yardsticks. Yet because these costs are not borne by Alcoa but by the citizens, governments, wildlife, and landscapes surrounding Alcoa’s operations, they are not factored into this “Environmental Impact Statement.” Even the Railroad Commission of Texas has acknowledged health effects as a cost category (Walter and Blair, 2000). A sufficient number of studies, conducted by highly credible institutions, now exist that document specific human health effects from coal-fired power plant emissions. Actuarial tables also exist, translating health effects into dollar costs in terms of health care, lost work time, and lost productivity due to mortality. Yet the DEIS does not give any of this information even the most cursory attention. Health effects from Alcoa’s use of lignite to fuel its Sandow power plants are *not only* a “reasonably foreseeable action” — *they are a past and ongoing reality*. It is inexcusable for the Corps to ignore this significant cost factor.

76-27

(NOTE: See comments regarding Public Health for additional information.)

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The public health effects alluded to in this comment are asserted to result from the burning of lignite at the Rockdale power generation and smelter complex, which is an existing, permitted operation. Since operation of the Rockdale complex is not considered part of the Proposed Action under NEPA, this EIS addresses atmospheric emissions and surface water discharges from this facility as they contribute in a cumulative sense to expected impacts resulting from the proposed Three Oaks Mine. Please see the responses to general comments AQ-1 and AQ-2 in Section 4.5.6 of the Final EIS relative to air quality impacts of the existing Rockdale facilities and the projected reduction in atmospheric emissions from the Alcoa generating units as a result of the VERP, respectively. Also see the response to general comment SW-5 in Section 4.5.5 of the Final EIS relative to water quality issues and associated monitoring data related to the Sandow Mine and the Rockdale complex.

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The DEIS fails to examine thoroughly Alcoa's contractual commitments and options in supplying fuel to Texas Utilities and to San Antonio's City Public Service.

It is difficult to imagine a corporation with the kinds of legal representation that Alcoa boasts entering into a contract that lacks any escape routes from the onerous conditions described by Alcoa regarding its contract with TXU. Moreover, there are legal issues related to the question as to whether Alcoa can be held liable for future actions it cannot control. In addition, Alcoa's contract with San Antonio's City Public Service allows that agency to take Three Oaks lignite for its own use at any time. If CPS were to decide it wanted a ready supply of lignite, and if the TXU contract were in fact ironclad, Alcoa would find itself in the very same bind that the company describes as untenable.

Under Alcoa's contract with CPS, there is a risk that Alcoa will lose access to lignite supply, and with very little notice. CPS highlighted the importance of its option to take lignite during public comment before the Corps on October 2 (comments by Barry Williams). This option presents Alcoa with the same fuel supply problems that it would face if the Three Oaks permit were to be denied, i.e., an inability to meet its contractual obligations to TXU (which Alcoa claims would be prohibitively expensive) and a lack of fuel supply for its own power generating units. One reasonable question for the Corps to ask is why would Alcoa enter into an agreement that contained such a tangible possibility of disaster? Assuming the answer is not incompetence, it is possible to draw two conclusions: Either the threat of disaster is not real, but has been overstated to support Alcoa's permit applications, or CPS really has no intention of taking any lignite. In fact, Alcoa's mine manager, Tommy Hodges has stated to a Neighbors for Neighbors representative that San Antonio is too far away for the use of Three Oaks lignite to be feasible given the speed with which lignite degrades. Alcoa's Section 401 certification questionnaire, included as Appendix B of the DEIS, also notes the following:

Lignite fuel sources need to be within a short distance of the power plant to be an economically feasible fuel source; and, local lignite reserves are limited to the lignite deposits in the lower Calvert Bluff formation. This limits practical reserve recovery to about 20 miles northeast or southwest of the plant.

The City of San Antonio is some 115 miles from the proposed Three Oaks Mine site. It would appear from this information that, absent the existence of the mine-mouth power plant that was originally envisioned when CPS began purchasing land and mineral leases in the Three Oaks area, there is no practical feasibility associated with CPS' contractual option to access Three Oaks lignite. If CPS has no intention of claiming lignite from Three Oaks, another question arises: Why would CPS insert the clause into its contract in the first place, and why would Alcoa agree to it when its very presence, however abstract, would pose a threat to the stability of Alcoa's fuel supply? A possible answer is that, without such a clause, the entire contract would be void because CPS may be exceeding the limits of the authorized use of the properties under lease to Alcoa.

The Corps, then, needs to seek definitive information regarding:

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76-28 The specific terms of Alcoa's lease with CPS are not at issue in this EIS, except to the extent that they grant Alcoa a legal right to mine and provide the lignite resource for use at the Rockdale generating station as part of the Proposed Action. It was Alcoa, not CPS, that applied for the Section 404 permit, which triggered this EIS under NEPA. Similarly, CPS' plans regarding other potential development activities related to their properties within the Three Oaks Mine area are not considered part of the Proposed Action. With the exception of the CPS/SAWS contract related to potential development of groundwater resources, CPS' plans are considered too speculative at this point to be considered in this EIS.

The RRC's review of Alcoa's application for a permit to mine included a thorough review of Alcoa's legal right to mine the lignite resources on individual properties within the proposed mine area. The USACE does not plan to repeat that review as part of the EIS process.

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- what the chances are that CPS might exercise the option so publicly touted by Barry Williams in his comments, including addressing issues of the location of use, transport, and degradation of lignite (including the increased risk of spontaneous combustion);
 - what Alcoa's plans are for addressing its own fuel needs and its obligations to TXU in the event that CPS were to exercise its option to take lignite; and
 - the extent to which there are questions regarding the validity of the Alcoa-CPS contract that may jeopardize the entire Three Oaks project.

7. Errors in the scope and analysis of "Past, Present, and Reasonably Foreseeable Future Actions" (Section 2.6)

In its analysis of reasonably foreseeable future actions, the DEIS fails to include critical factors, fails to establish and misinterprets relevant facts and data that could influence the DEIS's conclusions about projected groundwater drawdowns and alter the analysis of Alcoa's plans for groundwater withdrawals.

Errors and misinterpretations in the DEIS related to "reasonably foreseeable future actions" are most damaging in relation to water resources issues. Significant problems within the DEIS include:

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- its failure to consider the formation of local groundwater conservation districts;
 - its misinterpretation of and failure to clearly articulate the effects of the Alcoa/San Antonio water contracts (Section 2.6.2.2);
 - its failure to adequately address mitigation by either Alcoa or San Antonio of affected water supplies as a reasonably foreseeable future action;
 - its failure to consider the likelihood of future out-of-basin transfers of water from one of the State's most prolific aquifers;
 - its failure to establish with certainty Alcoa's intentions with respect to Sandow Mine (2.6.2.1); and
 - its failure to consider the forthcoming Central Carrizo-Wilcox Aquifer Groundwater Availability Model (GAM) from the Texas Water Development Board (TWDB).

One of the reasons these errors and omissions are so important is that the public is expected to and will rely on the integrity of the final EIS in addressing groundwater concerns, the topic which elicited the greatest number of substantive comments in the scoping process. The DEIS claims that the reasonably foreseeable future actions chosen for inclusion in the DEIS analysis are based on the best available information from the agencies and proponents involved or from credible published sources, but Neighbors cannot see where the USACE considered information from any source other than Alcoa and its contractors and consultants. As stated earlier, there was no coordination

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76-29 The USACE has reviewed the comments received in relation to the Draft EIS and has not identified omissions or misinterpretations within the reasonably foreseeable future actions described therein. In relation to individual points raised by the commenter, the following responses apply:

- Please refer to the response to general comment GW-5 in Section 4.5.4 of the Final EIS regarding the formation of local groundwater conservation districts. The formation of such districts and potential application of constraints on groundwater resources within their jurisdiction would diminish, not increase, the possible drawdown effects from municipal pumpage. Thus, the Draft EIS presents a conservative scenario in the absence of such constraints.
- The effects of the Alcoa/SAWS water development contract and the CPS/SAWS contract are thoroughly described as they relate to potential cumulative effects; they are not part of the Proposed Action.
- The Draft EIS addresses mitigation by Alcoa for water supplies potentially affected by mine-related pumpage. This is considered mitigation, not a reasonably foreseeable action. Such mitigation would be conducted in accordance with applicable regulations. Also, please see the response to comment 59-28.
- Currently known or proposed out-of-basin transfers have been considered (i.e., Alcoa/SAWS and CPS/SAWS). Other rumored transfers are speculative, at best, and do not qualify as reasonably foreseeable future actions.
- Alcoa's plans related to a closure schedule for activities at the Sandow Mine are presented and discussed in the Draft EIS on the basis of the best available information at the time the document was prepared. Please see the revised text for additional clarification and additional information that has evolved since the Draft EIS was being prepared.
- Please see the response to general comment GW-1 in Section 4.5.4 of the Final EIS regarding the reasons the GAM was not included as a major component of the groundwater modeling effort for the Draft EIS.

As stated in the Draft EIS, the USACE relied on the best available information from a variety of agency resource personnel, published sources, and the applicant in selecting the reasonably foreseeable future actions to be included in the analysis of cumulative effects. Information sources for this effort were selected on the basis of the expected probability of such sources being able to contribute substantive information to the analysis.

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whatsoever with FEMA and little coordination, if any, with the EPA. Although OSM and the USGS may have commented on some of the modeling used by Alcoa and USACE's contractor, ENSR, their comments were limited and do not appear to have been considered by USACE. In fact, the USACE's choice of actions appears to have been driven by Alcoa with no checks or balances. Its presentation of those choices likewise suffers from reliance, without independent study or investigation, on Alcoa's desired outcomes and conclusions.

(See also other sections of these comments for additional information related to this topic.)

8. Errors and omissions in analyzing "Water Resources" (Summary, Sections 2.6, 3.2)

The DEIS essentially fails in its analysis of groundwater and surface water quantity and quality impacts of the proposed Three Oaks Mine. In the materials dealing with water issues, arguably the seminal issues for USACE's inquiry, the DEIS fails to include critical factors and also fails to establish or misinterprets relevant facts and data that could influence the DEIS's conclusions and alter the analysis of Alcoa's plans. The risk of long-term, or even irreversible, harm to an essential natural resource should not be tolerated. Problems with the DEIS's analysis of water issues will be examined in some depth in these comments; however, the DEIS contains problematic redundancies, many of which are internally inconsistent, ambiguities, and examples of lazy organization and drafting errors too numerous to mention.

76-30

The DEIS purports to be a comprehensive environmental impact statement of all relevant aspects of a strip mine of the type proposed. Omissions or incomplete analyses of what, on balance, must be considered critical components of any such environmental impact statement therefore results in a failure of process. These errors and omissions are critical because the public is expected to, and will rely on, the integrity of the final EIS in addressing groundwater and surface water concerns, the topics that probably elicited the greatest number of substantive comments in the scoping process. If one examines the preliminary DEIS (PDEIS) released for Alcoa's eyes only last spring, the lasting impression arises that the DEIS suffers most from reliance, without independent study or investigation, on Alcoa's guidance to its desired outcomes and conclusions.

In prefiled expert testimony in the Texas Railroad Commission's proceedings on Alcoa's Three Oaks mine permit application, Alcoa's consultant Lee Wilson testified that:

[The EIS] is completely independent. The work is being done by the Corps and by a third-party contractor who reports to and is directed solely by the Corps. Alcoa's involvement is to pay for the work, provide information as requested by the Corps and its Contractor, and to review EIS work products *for factual content related to its application*. (emphasis added) (Alcoa Prefiled Testimony #15 at p.4)

The professed independence is not apparent when the PDEIS is examined, or even in a reading of the DEIS without the overlay of Alcoa's extensive rework of much more than the factual content of the PDEIS. Mr. Wilson may believe that the *process* provides for a completely independent analysis, but if the Corps and its consultants do not re-work the DEIS to *implement* the process, the ultimate EIS will be inherently flawed and will not withstand scrutiny.

76-30

Please see the response to comment 76-17 regarding inconsistencies in the Draft EIS. Please see the response to comment 76-16 regarding reliance on Alcoa information and Alcoa's role in reviewing the Preliminary Draft EIS.

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The DEIS arbitrarily and capriciously fails to address the essential issue associated with groundwater withdrawals related to Alcoa's mining projects — that of availability (to the last drop) vs. sustainability.

In its summary of issues and conclusions related to groundwater and surface water, the DEIS accepts yet another of Alcoa's biases without question or even discussion. The statement in the Summary (p. iii) that, despite significant drawdowns, "the aquifer would remain saturated" is tantamount to the oft-repeated phrase of water marketers and exploiters that there is "water available in the [Carrizo-Wilcox] aquifer" no matter what level of potential drawdown is under scrutiny. A version of that phrase has even been adopted in the regional water plan for the Brazos G Regional Water Planning Group, which includes Milam and Lee counties in its southernmost portion. Region G relied on the work of Alcoa's long-time consultants, R.W.Harden & Associates (Harden), and San Antonio's consultant HDR Engineering, Inc. (HDR) for that conclusion and therefore can hardly be considered to be wholly independent of Alcoa's influence.

The Central Carrizo-Wilcox Aquifer is recognized to be a prolific source of water, with huge storage capacity, affording the opportunity to use the "availability" phrase at every opportunity to grab some of its water. The problem is that the aquifer will have water "available" right down to the last drop, as has been pointed out by the Lost Pines Groundwater Conservation District (LPGCD) in its public presentations. This myopic view was also of great concern to a regional water planning group that the DEIS chose to completely ignore, the Region K, Lower Colorado Regional Water Planning Group (Region K) which includes Bastrop County.

The DEIS's characterization of a saturated aquifer in the face of Alcoa's drawdown numbers effectively acquiesces in this mindset of "availability." The inevitable result of that mindset, in the face of sprawling, thirsty, out-of-basin metropolitan areas, would be to burden the aquifer until the mostly rural local areas that *depend* on the aquifer suffer the irretrievable consequences. In its entirety, the DEIS *arbitrarily and capriciously* avoids any discussion of whether "availability" is an acceptable criterion for tolerating an unprecedented level of drawdown of a public water source for private gain. The DEIS fails to consider whether any enterprise, public or private, should instead adopt the philosophy of Region K and the LPGCD: that such a critical natural resource should be managed not to indefinitely tap its availability, but rather to enhance its longevity through a management strategy that requires "sustainability" and "renewability" as guiding principles. The necessity for this discussion was specifically raised and defended in scoping comments by both Neighbors (which identified this debate as an "essential issue" for the EIS) and LPGCD. Equally important, the principle of guarding a precious resource, capable of ultimate *depletion*, is inherent in virtually all the public comments on water issues during the scoping process. USACE and its consultant obviously chose to avoid this debate entirely, favoring the blanket conclusion (i.e., assumption) that the "aquifer will remain saturated."

The Railroad Commission of Texas (RRC) has demonstrated that the essential question of balancing interests will never be reached by that agency – the agency's legislative biases are to favor full production of natural resources and rely on mitigation of water supply (*after* damage), in lieu of damage prevention. Any effect that does not last "forever" is considered "temporary." The state agency with exclusive regulation of (i.e., an implicit legislative mandate to "protect") water withdrawals for mining purposes has thereby relegated water to a backseat behind private industry's

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76-31 This comment has two components: 1) the definition of a fully saturated aquifer, and 2) the issue of availability versus sustainability. The drawdown of the Simsboro aquifer by the Three Oaks Mine would not lower the potentiometric surface of the aquifer below the top of the Simsboro Formation throughout most of the affected area. Thus, the aquifer would remain fully saturated except near the outcrop. The definition of a fully saturated artesian aquifer is one that has the potentiometric surface above the top of the formation. Relative to availability versus sustainability, the EIS has stated that the main cumulative impact on the Simsboro aquifer would come from municipal pumpage, not from the Three Oaks Mine. In accordance with NEPA, the EIS analyzes the Proposed Action and the Proposed Action's contribution to overall cumulative impacts. The Three Oaks Mine would operate for 25 years and pump at a maximum of 11,000 acre-feet per year from the Simsboro aquifer. This compares to the current municipal pumpage of 50,000 plus acre-feet per year from the Simsboro aquifer by Bryan/College Station. Please note that the TWDB's projections in their *Water for Texas – 2002* report indicate that there is sufficient water in the Carrizo-Wilcox aquifer system to supply the lower basin area of Region G for the next 50 years.

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efforts to deplete other recoverable resources. San Antonio has projects for at least twice as much as its projected water needs through 2050 in the planning stages. Thus, the only “need” for this water is a billion dollar corporation’s “need” for the supposedly cheapest fuel, additional profits and entry into the lucrative field of water marketing.

76-31

The citizens of Lee and Bastrop counties saw the “independent” study by the USACE as an opportunity for government to protect present and future generations. They might have hoped that USACE was not bound, as RRC thinks it is, to look at hydrologic effects as either “temporary” or “permanent,” leaving the range of “temporary” as broad as it needs to be to promote strip-mining. Instead, via the DEIS, citizens have once again been asked to accept Alcoa’s and San Antonio’s “party line” of “trust us, we’re looking out for you, we’ll probably damage you but we’ll just mitigate.” The DEIS Summary simply states “Alcoa would mitigate any mine-related impacts to these wells, as required by the [Railroad Commission].” Nowhere is the question answered or even addressed: Is it reasonable to allow potentially irreversible damage to an essential natural resource based on an open-ended promise to “fix it”? (See also discussion of problems with mitigation, below.)

The DEIS summary of groundwater issues is internally inconsistent and is not capable of clarification due to inconsistencies and vague and ambiguous information relied upon in Section 3.2. The DEIS, in particular Section 3.2, indicates sloppy attention to detail throughout and should be rewritten if the DEIS’s conclusions are to be considered supportable.

Before summarizing three cumulative impact scenarios, the DEIS appears to summarize the effects of dewatering and depressurization at the proposed Three Oaks Mine. Declines in groundwater levels in the Simsboro outcrop west of the mine are set at 10-50 feet, potentiometric surface declines in the artesian Simsboro are set at 10-100 feet outside and 100-200 feet inside the permit area, and in the artesian Calvert Bluff are set at 10-20 feet outside and up to 50 feet inside the permit area. Any effect of 20 feet or greater is expected to require mitigation (p. iii). The DEIS then assigns primary responsibility for these “cumulative” impacts to regional municipal pumping with substantial contribution from pumping for SAWS at Three Oaks and Sandow Mines. Neighbors would note that Alcoa apparently induced USACE to change the phrase “water level declines” in the Summary to “potentiometric surface declines,” as a result of Alcoa’s review of the PDEIS, thus further softening the meaning for the lay reader.

76-32

In its summary (p. iv) of the three cumulative impact scenarios – Three Oaks without SAWS, Three Oaks with SAWS and SAWS without Three Oaks – the effects of the second scenario, *presumably the same one that is outlined in the preceding paragraph*, are again summarized. In the “Three Oaks with SAWS” summary, drawdown in the Calvert Bluff would be 20 feet inside the mine and 10-20 feet outside the mine by 2030, declining to 10 feet throughout the Calvert Bluff by 2050. The Simsboro would experience 60-100 feet of drawdown at the mine declining to 30-50 feet west of the mine, 40-100 feet in the outcrop west of Sandow, and 10-50 feet “at the Colorado River” in Bastrop County. By 2050, the latter effects would total 100-180 feet, 70-100 feet and 10-80 feet, respectively. No explanation is given for the apparent inconsistencies with the numbers in the preceding paragraph. One has to read the first summary of drawdowns carefully to conclude that USACE *may* have been attempting to isolate the effects of Three Oaks so that it can ultimately conclude that Three Oaks would have a “limited” contribution to cumulative impacts over the life of

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76-32 The individual issues of this comment are addressed below.

- As discussed in Section 3.2.3.1 of the Draft EIS, water level applies only to unconfined aquifers, and potentiometric surface applies to confined or artesian aquifers. Most of the aquifers in the Carrizo-Wilcox aquifer system, including the Simsboro, are under artesian conditions. Water table conditions in these aquifers only exist in areas along the aquifer outcrops. As a result, the change from water level to potentiometric surface was made in the EIS, where appropriate, to be technically correct.
- The reference text refers to cumulative impacts, which were modeled using the Modified Region G Model. The Three Oaks Mine pumpage would cease in year 2030. SAWS pumpage at Sandow could begin around year 2013 and continue to year 2050. SAWS pumpage of up to 15,000 acre-feet per year could begin at Three Oaks in year 2031 and continue to year 2050. Regional municipal pumpage continues to increase throughout the period from 2000 to 2050. This timing accounts for the changes in numbers. Regional cumulative pumpage and the cessation of some pumpage and the startup of other pumpage account for the changes in numbers. Cumulative pumpage demands are presented as required by NEPA, but only to the extent necessary to show the relationship between the Proposed Action and cumulative impacts. Note that if Three Oaks does not go into production, SAWS may begin around year 2013 in the Three Oaks area and pump 15,000 acre-feet/per year from the Simsboro, which is 5,000 acre-feet/year greater than may be allowed if Three Oaks were in production.
- Table 2-16 of the Draft EIS compares the potential impacts of the Proposed Action and the No Action Alternative. These alternatives are described in Sections 2.5 and 2.3, respectively, of the Draft EIS, and both are analyzed in the environmental consequences sections of the various resources. The referenced table is intended to aid the decision maker (in this case the USACE) in comparing the permitting options available to the agency (see Section 2.2 of the Draft EIS). The table is not a comparison of the cumulative scenarios.

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the mine and after. How then is it possible that the “Three Oaks with SAWS” scenario produces lesser impacts in some cases than the isolated Three Oaks? Given USACE’s inability to clearly articulate drawdowns in its Summary, one is not given much hope that credible explanations will follow in the more detailed analysis in Section 3.2.

No additional help is gained from a review of Table 2-16 (page 2-85) that purports to summarize the comparative impacts of the “Proposed Action” and “No Action” alternatives with respect to groundwater, specifically declines in levels at the aquifer outcrop and in private and municipal wells. That table includes such a nonsensical juxtaposition of information as to be useless to the reader who tries to comprehend the entirety of the groundwater discussion and work back to these conclusions. How does one compare the vague and ambiguous “No Action” conclusions that groundwater levels in the Simsboro aquifer outcrop area and the Simsboro aquifer “would continue to decline in response to municipal pumpage” to the following statements in the “Proposed Action” column:

Water levels in the Simsboro aquifer outcrop area west of the Three Oaks Mine would decline by 10 to 50 feet. Drawdown in the Calvert Bluff 200 and 800 lignite zones would not affect groundwater levels in the Calvert Bluff outcrop area... Water levels would decline for wells within the 20-foot or greater drawdown areas for the Simsboro aquifer and lower third of the Calvert Bluff aquifer. Alcoa would modify or replace impacted wells in accordance with RRC regulations.

76-32 The absence of coherence between the two columns may be somewhat attributable to edits to Table 2-16 that took place after the PDEIS was issued to Alcoa. These edits are more fully described below in connection with groundwater mitigation issues. Further, the summary of the three scenarios (page iv) inexplicably finds *less* drawdown outside the mine in the Calvert Bluff *with* SAWS than *without* SAWS. As a general matter, the groundwater models examined in the DEIS for the three scenarios seem to produce *larger* drawdowns for the SAWS Contract *without* Three Oaks scenario than for the Three Oaks *with* SAWS Contract scenario. The assumptions used to arrive at these counter-intuitive conclusions seem, at best, *unsupported in the DEIS*, and at worst, altogether *unsupportable*.

The Summary’s version of the impacts of the SAWS contract is the first encounter a reader has with the inherent flaws that permeate the DEIS examination, as more fully described earlier in the “Overview” pertaining to water resources. Apparent errors in Table 3.2-5 provide some clue as to why larger drawdowns seem to occur for Three Oaks without SAWS than with SAWS. Table 3.2-5 seems to forget to include production of up to 15,000 AFY from CPS lands, instead using an average of 10,000 AFY from Lee and Bastrop counties. (Table 3.2-5 also erroneously shows 40,000 AFY coming from Milam County when it appears that actually the Sandow well fields cross over into Lee County.) In any event, the numbers should be revised to reflect up to 15,000 AFY from CPS lands, including Three Oaks Mine property owned by CPS, or even greater amounts if the water production possibilities under the SAWS/CPS contract are developed fully (see additional discussion below).

Another discrepancy that illustrates the internal inconsistency in the DEIS is the inclusion in Table 3.2-5 of 5,000 AFY for “steam electric demand” in Milam County for the period between

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- SAWS pumpage would not affect the Calvert Bluff aquifer; all SAWS pumpage would come from the Simsboro aquifer. The reason that SAWS without Three Oaks scenario has greater drawdown on a regional basis than Three Oaks plus SAWS scenario is that without the Three Oaks Mine, SAWS may begin pumping 15,000 acre-feet per year from the Three Oaks area starting in year 2013, a greater amount than would be pumped by the Three Oaks Mine from the same area. With the Three Oaks Mine, SAWS would not start pumping from Three Oaks until year 2031. As a result, SAWS without Three Oaks would have more impact on groundwater withdrawal than Three Oaks with SAWS.
- The modeling for cumulative impacts included pumpage in both Milam and Lee Counties for the Sandow Mine area. Table 3.2-5 in the Draft EIS does not represent what was used in the modeling; it is a summary table for estimated water demand in the future for the cumulative impact area. All Sandow-related pumpage was put into Milam County for convenience in that table. Please note that SAWS would not pump water from the Three Oaks Mine area until the mine closes. As a result, the EIS used the conservative value of 10,000 acre-feet per year for the mine area up to year 2030. From 2031 to 2050, the EIS used 15,000 acre-feet per year. Also see the response to general comment NEPA-3 in Section 4.5.1 of the Final EIS relative to the Alcoa/SAWS and CPS/SAWS contracts.
- The values in Table 3.2-5 refer to the year at the head of the column in which they appear, not to the interval between the two columns. Thus, the 45,000 acre-feet per year for year 2000 applies to that year. The discrepancy between 5,000 acre-feet per year in the table and 7,200 acre-feet per year in the text has been corrected in the Final EIS; the correct value, as used in the Modified Region G Model for cumulative impact assessment, is 5,000 acre-feet per year. The manufacturing demand, as well as all other values in the table, comes from the TWDB database. Values in this table are not meant to reflect the details of permit applications. They are conservative estimates for the year at the head of each column. If it is known that a value will change between two column years, for example between year 2000 and 2010, then the groundwater model utilized a time-weighted average over that 10-year period for estimating impacts.
- For the closure of the Sandow Mine, the groundwater model assigned pumpage amounts as averages that reflect the number of years during a 10-year interval that a given pumpage amount was in effect (time-weighted averages). As stated above, the values are not meant to reflect the details of the permit applications, rather they are conservative estimates for the year at the head of each column. Also see the response to general comment GW-11 in Section 4.5.4 of the Final EIS relative to the sensitivity of the groundwater impacts to pumpage rates.

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2010 and 2030, combining with a spike in “manufacturing” demand of 5,000 AFY in years after 2020, while Section 2.6.2.1 cites an amount equivalent to approximately 7,200 AFY to be withdrawn from Sandow mining wells for “ongoing industrial use” after closure of the mine. Table 3.2-5 also relies on information from Alcoa (as indicated in a footnote) for the 45,000 AFY demand for Sandow, potentially through the year 2009, changing to 0 in 2010. The Corps might have been well advised to check RRC records for the actual amounts pumped at Sandow for the year 2000 and the actual amounts permitted through 2004, the current end of the permit term. The magnitude of the potential withdrawals RRC would tolerate through at least 2004 indicates that the RRC may have already rationalized tolerating ever-increasing, depressurization demands.

76-32

Sandow Mine’s projection of 45,000 AFY dropping to 0 between 2000 and 2010 is also interesting when Alcoa’s supposed timetable for closure of Sandow is considered (Section 2.6.2.1). If mine closure begins in 2003, one first wonders why it will take *five* years to actually complete closure – that is, an entire permit term will be devoted to not much more than creation of end lakes (the other activities included in Section 2.6.2.1 would not seem to require five years when the range of mining activities accomplished in a normal 5-year permit term is considered.) Yet, mining water demand included in Table 3.2-5, and incorporated into the modeling, allows an unprecedented 45,000 AFY, potentially through 2009, to be withdrawn during the process of creating end lakes, tearing down a few ancillary facilities and final grading and revegetation, the latter two of which would not seem to increase the need to depressurize the aquifer at such an extraordinary level. The lay person can only be left to wonder, or hope that the Corps will begin to wonder, how overestimates of current pumpage, and the potential for manipulation of projected pumping through at least 2010, might play into the results of modeling of the cumulative impact scenarios.

The DEIS fails to consider local groundwater conservation districts, either as a reasonably foreseeable future action (2.6.2) or as a present state and local water resource management organization (3.2.1.2).

76-33

There is no mention in the DEIS of any future regulation of Alcoa’s pumping or export of water by groundwater conservation districts (GCDs) organized under Chapter 36 of the Texas Water Code to manage local groundwater resources. Yet, Bastrop, Lee, Milam and Burleson Counties and other counties in the region have confirmation elections for legislatively-created districts set for November, 2002. The formation of the Lost Pines Groundwater Conservation District (LPGCD) for Lee and Bastrop counties, and the Post Oak Savannah Groundwater Conservation District (POSGCD) serving Milam and Burleson counties, is a critical factor which could substantially alter projected drawdowns for the three cumulative impact scenarios included in the DEIS. Also, State and Local Water Resource Management (Section 3.2.1.2) ignores the fact that GCDs are currently the only legislative or judicial limitation on the so-called “Rule of Capture.”

The Railroad Commission of Texas (RRC) has authority over wells permitted for surface mining operations, including Alcoa’s dewatering and depressurization wells at Sandow. Alcoa plans to use those same depressurization wells to pump water for export to San Antonio or other end users. However, those same wells will become subject to GCD regulation if they are not used for mining or if they are used to pump more water than is needed for mining. The DEIS accepts Alcoa’s estimated closure date for Sandow of 2008 and notes that closure will result in “termination” of depressurization and dewatering activities, as well as surface water discharges (2.6.2.1). The 40,000

76-33

Please refer to the response to general comment GW-5 in Section 4.5.4 of the Final EIS regarding the role and jurisdiction of groundwater conservation districts.

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acre-feet per year (AFY) that Alcoa plans to continue delivering to San Antonio after Sandow's "termination" and Alcoa's industrial water demands from those same wells would then be subject to the jurisdiction and rules of the local GCDs. (See discussion of Sandow Mine and of the SAWS contract below.)

76-33

LPGCD has already actively engaged in adopting rules, primarily to regulate large pumpers in the district, and in planning for how best to sustain the local formations of the Carrizo-Wilcox Aquifer as renewable resources for future generations. The Alcoa/SAWS plan is a plan of depletion – the DEIS acknowledges that impacts to the aquifer will take over 100 years to reverse after Three Oaks pumping stops. (Section 3.2.3.5) There is of course no expectation, given the renewal provisions of the CPS/SAWS contract, that such pumping will in fact stop. Consequently, there is no guarantee that pumping of 40,000 to 66,000 acre-feet per year for SAWS (see discussion of SAWS contract below) and another 5,000-7,000 acre-feet for "steam electric demand" for Alcoa would be permitted.

After confirmation, groundwater districts adopt management plans and coordinate efforts with neighboring districts to manage groundwater resources. Such plans can include provisions for restricting pumping in response to aquifer impacts. It is likely that groundwater districts will choose to manage the resource responsibly, by placing special protections on more sensitive, shallow parts of aquifers, and on outcrops and recharge zones. The predominance of such areas in Alcoa's sphere of influence would likely bring careful scrutiny of and probable limitations on Alcoa's and CPS's activities. The DEIS's impact analyses should include the consideration of such restrictions on pumping. The discussion below is also relevant to the failure to consider the impact of groundwater conservation districts in the DEIS.

The DEIS misinterprets or misstates critical terms in its analysis of the San Antonio/SAWS contract as a reasonably foreseeable future action (Section 2.6.2.2).

76-34

Section 2.6.2.2 fails to correctly describe the Alcoa/SAWS and SAWS/CPS contracts. The first sentence of Section 2.6.2.2 appears to lump the Alcoa/SAWS contract with the separate and distinct SAWS/CPS contract, citing them together as a contract "between Alcoa and SAWS for 40,000 to 66,000 acre feet...from Alcoa and CPS lands," citing the source document "SAWS 1998." SAWS 1998 is defined in Section 6.0 as the December 31, 1998 contract between Alcoa and SAWS. The SAWS/CPS contract is not even cited as a source document. Further, the DEIS is unclear and seems to set the amount of 40,000 to 66,000 AFY as the *maximum combined amount under both contracts*.

If USACE and its consultants had bothered to review source documents, several facts would have been apparent. The Alcoa/SAWS contract ("1998 Contract") seems to allow *any* agreed number as the "Maximum Annual Quantity" that SAWS can receive under the contract (Sections 2.01 and 2.08). Neighbors for Neighbors believes that SAWS has, by board resolution, called for 40,000 (AFY) as its *initial* designation of demand under Contract Section 3.03(b). The possibility of mutually agreed increases under Contract Section 2.08 appears not to have been foreclosed, in contrast to Mr. Tommy Hodges' testimony at the unsuitability proceeding concerning the Three Oaks Mine (RRC, 2000-2001) that the contract had been *amended* to require the delivery of only 40,000 AFY. No such amendment was produced by Alcoa to NFN in the discovery proceedings for

76-34 Please refer to the response to general comment NEPA-3 in Section 4.5.1 of the Final EIS relative to SAWS.

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the Three Oaks mine permit proceedings, and no such amendment was delivered to NFN by SAWS upon an Open Records Request for amendments. The contracts are complex, and it is ludicrous for the DEIS to rely on a SAWS press release for the proposition that the Alcoa/SAWS contract is now permanently limited to 40,000 AFY.

Moreover, the cited press release quotes SAWS Executive Director, Gen. Eugene Habiger, as saying: "While the original contract with Alcoa allows SAWS to acquire up to 19.5 billion gallons (60,000 acre feet) of water per year from the aluminum producer, SAWS has reduced its projected need to the 13 billion gallons (40,000 acre feet) that feasibility studies show to be a conservative sustainable yield." Perhaps the operative word in his statement is "conservative." A more honest examination of such an important impact would have acknowledged there is nothing permanent or binding about SAWS's initial "conservative" determination. USACE and its consultants also would have been better advised to review, and include as a source document, the actual feasibility study by HDR from which General Habiger derived his benevolent statement. Such examination would reveal that San Antonio's consultants would not have great difficulty supporting withdrawals greater than 40,000 AFY.

HDR's 2000 "Preliminary Feasibility of Options to Deliver ALCOA/CPS Groundwater to Bexar County" actually studied two amounts: 55,000 AFY and 75,000 AFY. For the 55,000 AFY (presumably based on 40,000 AFY from Sandow under Alcoa/SAWS, and 15,000 AFY from CPS land under the SAWS/CPS contract), HDR actually modeled simulated pumpage of 51,310 AFY rather than 40,000 AFY from the Sandow well field in order to reserve 10,000 AFY for Alcoa's use. HDR found the "55,000 AFY" (sic) scenario to be sustainable for 80 years. Since the number modeled for this scenario was actually 66,310 AFY, General Habiger's remarks should have been put in the proper context, assuming the use of a press release as a dispositive source of baseline information was reasonable in the first instance. In fact, the SAWS contract does not by its terms preclude delivery of more than 40,000AFY.

There is also no apparent basis for the DEIS's statement in Section 2.6.2.2 that the "1998 SAWS contract" is for delivery of "40,000 to 66,000" AFY from "Alcoa and CPS lands to the City of San Antonio." The DEIS thus begins its hopeless muddle of numbers that permeates the groundwater discussion and thoroughly confuses the reader. The USACE and its consultants have no been no more successful in penetrating the Alcoa/San Antonio shell game than the general public has been since 1998. The public cannot even get Alcoa and San Antonio in the same room to answer questions; there apparently is no cause for optimism that USACE can do any better if it must rely on press releases to establish the parameters of its analysis.

Consequently, a demand from the Sandow depressurization wells of 40,000 acre-feet is no more foreseeable than any other greater (or lesser) number. Because the contract has no upper limitation on the parties' ability to agree on a higher number and because the area from which water may be produced under the contract is greater than is considered under Section 2.6.2.2. (see below), the DEIS's arbitrary use of 40,000 AFY and 15,000 AFY as upper limits, and the use of the mine borders as the limits of the withdrawal sites, could produce substantially inaccurate drawdown results. Further, Section 2.6.2.2 recites (incorrectly in some cases as discussed below under mitigation issues) several "terms" of the "1998 SAWS contract" to arrive at the unrelated conclusion

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that "SAWS water production from CPS lands would be a maximum of 15,000 [AFY] inclusive of any water produced from the proposed Three Oaks Mine."

The DEIS fails to persuade why the 1998 SAWS contract *must* be read to so limit CPS's production from its own land. Alcoa has professed in public forums not to have any control over what CPS pumps outside of mining water. For example, such statements were made by Alcoa officials in answer to audience questions during a joint session of Region K and Region L in Belton, Texas. Moreover, the 1998 SAWS/CPS contract reserves the right to pump 15,000 to 30,000 AFY on its own, as "SAWS Water Rights." While full development of SAWS Water Rights would be affected by mining demands, there is much less certainty about potential demand under the combined San Antonio contracts than the DEIS acknowledges.

76-34

The DEIS also appears to misinterpret the geographic scope of the Alcoa/SAWS contract. Impacts of Three Oaks pumping appear to be subsumed within the impacts of the SAWS contract as a basis for characterizing their importance as minimal and inconsequential. In fact, the contract allows water to be delivered to San Antonio from an area bounded by the updip limit of the Carrizo-Wilcox Aquifer, the Brazos River, and State Highways 21 and 290. If the majority of the pumping were to come from deeper parts of the aquifer, closer to Highway 21, resulting drawdowns would be different than those presented in the DEIS. It is therefore not reasonable to assume, as the DEIS assumes in the three cumulative impact analyses, that all of the supply to San Antonio would necessarily come from depressurization wells at Sandow and Three Oaks. In the DEIS analysis, the impacts from the 11,000 AFY to be withdrawn for the proposed mine were overshadowed by the concurrent pumping of 40,000 AFY from Sandow for SAWS, and the 15,000 AFY from Three Oaks post-mining. The DEIS fails to evaluate the full range of possibilities. The DEIS also fails to consider the potential differences in impact if the Sandow pumping were to shift to less sensitive areas than the shallow outcrop of the aquifer.

(See discussion of Mitigation, below, for additional examples of contract misinterpretation.)

The DEIS fails to consider another reasonably foreseeable future action, i.e., the potential for additional commercial water projects for out-of-basin exports from the Central Carrizo-Wilcox Aquifer.

76-35

Modeling done by Dr. Alan Dutton of the Bureau of Economic Geology (BEG) in a study commissioned by Alcoa and others for the Texas Water Development Board (TWDB) in 1999 is cited as a reference for the DEIS. However, this modeling is referred to only in Section 3.2.3.1 for the proposition that Dr. Dutton found adequate water supplies in the aquifer to meet current demand. The USACE apparently chose to ignore not only Dr. Dutton's other conclusions from the 1999 study but, more importantly, chose to ignore his and TWDB's followup work on a Groundwater Availability Model (GAM), due to be released in January, 2003. While Alcoa and San Antonio, as proponents of the Three Oaks mine, may protest that the 100,000 AFY Alcoa/SAWS demand modeled by Dr. Dutton in 1999 is not realistic under the SAWS and CPS, Dr. Dutton's work nevertheless is instructive and should be considered in the DEIS.

Active attempts by water marketers to lease large acreages of private land in Burleson and Lee counties, and perhaps in Milam and Bastrop counties as well, have been widely reported both in

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76-35 Water projects that have not been formally announced or are not the subject of various permitting actions, but are only in the speculative stage, are not considered to be reasonably foreseeable future actions under NEPA. As a result, they were not considered in the EIS. Please refer to the responses to general comments GW-1 and GW-2 in Section 4.5.4 of the Final EIS relative to the GAM and Dutton model.

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76-35 the regional media and by local citizens who have been solicited for water leases. The purpose of such leases is apparently to secure potential water supplies for export to municipalities other than San Antonio lying outside the study area. Further, Alcoa's reservation of rights under its contract with SAWS to sell water to third parties should not be ignored. Because the Central Carrizo-Wilcox Aquifer is part of one of the most prolific aquifers in the State, such projects *are* reasonably foreseeable. Furthermore, it is *not* reasonable for the DEIS to avoid consideration of additional demand for massive withdrawal projects similar to Alcoa's in the study area. Stated another way, such water projects would clearly fit the DEIS's first two criteria for reasonably foreseeable future actions, and inclusion of such projects in the study is no more or less arbitrary than inclusion of the Alcoa/SAWS contract which is terminable virtually at will by Alcoa.

Even Dr. Dutton's 1999 report did not take into account the explosive growth projections for Bastrop County revealed in the 2000 census and in the two years following. The discrepancies between the significant drawdowns Dr. Dutton predicted and the relatively insignificant drawdowns (as projected in the DEIS) become hard to explain – the DEIS conveniently avoids an explanation by completely ignoring the Dutton report, currently an official report of the Texas Water Development Board. The DEIS's more egregious failure to consider Dr. Dutton's current work for TWDB on a comprehensive Groundwater Availability Model is discussed separately below.

The DEIS fails to elicit definite information about the future of the Sandow Mine and instead relies on equivocal information provided by Alcoa, resulting in potentially detrimental reliance by the public on Alcoa's claims.

76-36 Despite the failure by the USACE and its consultant to consider the influence of groundwater conservation districts on Alcoa's water withdrawal project, the local public will rely on the information in the DEIS that Alcoa will close the Sandow mine by the year 2008 and will "terminate" its depressurization and dewatering activities upon closure (Section 2.6.2.1). The public's expectation is that such "termination" will bring the Sandow wells under the jurisdiction of local GCDs (to the extent they have not already done so by pumping in excess of mining needs). There is considerable public sentiment, which stems from a distrust of San Antonio if not of Alcoa, that without local regulation, the SAWS contract will irretrievably and negatively impact the area for at least 50 years. Neighbors would remind the USACE that effects that last as long as 50 to 100 years are not "temporary" when the average citizen's lifespan and livelihood are considered.

However, the lack of clarity in language such as "Alcoa currently *proposes to begin* mine closure" in 2003 and "*estimates*" that closure would be completed in "*approximately*" 5 years (p. 2-82) is troubling. It has already been pointed out in a previous discussion that even five years may be an unreasonably long period to accomplish closure and may simply be a ruse to artificially prolong "mining water demand." Alcoa has certainly been precise when "facts" are presented that are most favorable to the company's preferences; hence, vague characterizations of "facts" that are solely in Alcoa's control become problematic. In fact, Alcoa has publicly equivocated about the timing of Sandow's closure and/or continued depressurization/dewatering at Sandow after Three Oaks opens. The concern expressed by local citizens interested in planning for the future is that Alcoa will have ample opportunity to keep the Sandow permit, and its generous water pumping permits, open for *multiple* five-year terms after closure commences, under the aegis of an industry-friendly RRC. The fact that a portion of the haul road that may be necessary for the Three Oaks Mine might have to be

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76-36 Please see the response to general comment GW-11 in Section 4.5.4 of the Final EIS relative to the sensitivity of the groundwater impacts to pumpage rates. Industrial and power plant pumpage at the Sandow facility after mining and reclamation activities are complete is estimated at approximately 5,000 acre-feet per year. Appropriate sections of the Draft EIS have been revised in the Final EIS to show the correct figure of 5,000 acre-feet per year rather than the incorrect figure of 4,443 gpm. The actual dates for cessation of pumpage and mine related activities at the Sandow Mine are unknown and are dependent on many factors including permitting schedules for Three Oaks and Sandow, economic and business factors and transition schedule between Sandow and Three Oaks mines. In addition, schedules for the beginning of mine closure, cessation of mine related pumpage, completion of mining (lignite recovery), completion of reclamation activities, and mine closure are all different. Based on Alcoa's current scheduling, the EIS text has been modified to show the following dates: Beginning of Mine Closure and Reclamation – 2003; Cessation of Mine Related Pumpage – End of 2005; Completion of Mining – Before 2008; Completion of Reclamation Activities and Mine Closure – 2008. The closure of the Sandow Mine is anticipated by 2008. The discrepancy has been corrected in the Final EIS.

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76-36 permitted under the Sandow permit lends credence to this concern. The USACE should have done a better job of establishing the relevant facts that form the basis for its analysis of groundwater impacts.

The DEIS fails to consider in Section 2.6.2, without explanation, the reasonably foreseeable future action of the expected delivery of a Groundwater Availability Model for the Central Carrizo-Wilcox Aquifer in January, 2003.

Dr. Dutton, on behalf of BEG, and Harden and HDR as subcontractors, have been commissioned by TWDB to develop a "Groundwater Availability Model" for the Central Carrizo-Wilcox Aquifer, designed to build on and improve recent modeling of the aquifer, including Dr. Dutton's work from 1999. The model is expected to be completed in January, 2003. The TWDB has encouraged and supported stakeholder participation in the process, allowing ordinary citizens and citizen groups to have input. The desired public perception appears to be a belief that state of the art science and data have been used to assure adequate water supplies or to recognize inadequate supplies over a 50-year planning period. The goal is to provide model predictions that can be used to evaluate water availability under various policy and water-management options. The scope of work as outlined on the TWDB website is instructive for the DEIS, particularly because the GAM recognizes, *inter alia*, adoption of the model as a tool to evaluate water-management strategies consistent with regional water plans and groundwater conservation district management plans.

76-37 To the best of NFN's knowledge, consistent with ignoring the existence of GCDs in the DEIS, the USACE and its consultant made absolutely no attempt to solicit any input from local groundwater districts and paid little or no attention to LPGCD's written comments in the scoping process. Those comments, like NFN's, emphasized the need for the EIS to consider the GAM. The DEIS fails even to address the reasons for ignoring the relative coincidental completion of a model as useful as the GAM is expected to be. We believe that USACE decided to ignore the GAM because Dr. Dutton, probably wisely, declined to release any interim conclusions from his work. Instead, the DEIS puts virtual total reliance on Alcoa-suggested manipulations of the Brazos G Regional Water Planning Group model. The GAM should be evaluated on its merits by USACE and its consultants when it is completed; anything less under the circumstances is indefensible. Moreover, the USACE should not even consider finalizing the EIS until such an evaluation has been performed.

Cryptic records of an EIS project management conference call on January 24, 2002 raises a question of just how much, and for what reasons, the Region G model was manipulated to become the "Modified Region G" model. The following statement appears under the topic of "Interagency Hydrology Review":

Hydraulic conductivity of the Region G Model (which was designed for water usage purposes) was based on data in the available literature rather than field data. It also differs from Dutton's data. The sensitivity analyses on the model indicate that the model is sensitive to hydraulic pressure. As a result, it is anticipated that the model would generate overly conservative impact conclusions. The model could be recalibrated (approx. 1-week effort). It was agreed that the basis for development of the Region G Model would be

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76-37 Please see the response to general comment GW-1 in Section 4.5.4 of the Final EIS regarding the GAM. The Modified Region G Model uses the hydraulic parameters in the original Region G Model of R.W. Harden & Associates, Inc. Those hydraulic parameters, which include hydraulic conductivity, are based on field data where field data are available. Where no field data are available, best estimates from studies in similar basins (i.e., literature values) are used for the main sedimentary types in the formations modeled.

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identified in the technical report, and the *EIS will move forward with the current model until USGS/OSM completion of the model review. At that time, the model may be recalibrated using available field values and any additional input from the reviewing agencies, if appropriate. The hydraulic conductivity for the Three Oaks model was based on field data. (emphasis added)*

76-37 When asked during the scoping process in 2001 why the draft EIS was then expected to be completed by April, 2002, a USACE representative reportedly told a member of NFN that he guessed “that’s about the time Alcoa starts to run out of lignite.” It can only be presumed that the same self-serving timing is driving the decision to proceed to a final EIS a mere three months prior to the GAM’s completion.

(See the discussion below in connection with Section 3.2.3.1 for a specific discussion of the use to which the GAM might be put to assure the integrity of the DEIS as a state of the art analysis of potential groundwater impacts.)

The DEIS fails to adequately consider the nature and scope of Alcoa’s and San Antonio’s promises to mitigate damaged water supplies.

76-38 The future effects of Alcoa’s dewatering, depressurization and water marketing activities on public and private water supplies are probably uppermost in the minds of citizens who have concerns about the proposed Three Oaks Mine and the San Antonio water contracts the mine will facilitate. The public apparently has no choice but to endure harm, given a regulatory regime governing strip-mining that waits for damage and then tries to cure it, rather than preventing harm in the first place. The DEIS indicates that USACE has accepted this regime. It is therefore incumbent on USACE to do better than devote a few sentences to mitigation with the conclusion that “Alcoa would mitigate any mine-related impacts to these wells, as required by the RRC” (p. iii). The DEIS should have considered mitigation of water supplies in more detail. That is, USACE and its consultants should have considered how landowners’ rights to mitigation will be established in the unique set of circumstances that will result if all of Alcoa’s and San Antonio’s plans come to fruition. An important factor that should guide USACE to inquire further is the overlay of the minimum 40,000 AFY that Alcoa plans to pump from Sandow for San Antonio, under a contract that will continue long after Alcoa’s mitigation obligation at Sandow has ceased (if indeed Alcoa closes Sandow Mine).

The USACE is not legally constrained by the mitigation provisions of Texas mining law. Thus, the failure by the DEIS to address the underlying need for additional measures (beyond GW-1 and GW-2 [p. 2-67]) to assure that mitigation of affected water supplies is carried out in a manner protective of the public interest, amounts to an arbitrary and capricious neglect of the environmental protection of the public. If, in the face of substantial evidence to the contrary, the USACE persists in supporting the DEIS’s “Proposed Action,” groundwater baseline monitoring of the type described in GW-1 and GW-2 (Table 2-15) should be an absolute minimum requirement for the reasons stated therein: future assessment of drawdown impacts and for use as a tool to assess responsibility to modify or replace existing “private wells” (presumably, including public water supplies that may be affected). The DEIS should have concluded that such additional measures should be implemented,

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76-38 As stated in the Draft EIS, groundwater withdrawal by Alcoa for mining of lignite at the Three Oaks Mine would be governed and regulated by the RRC. Their guidelines for mitigation of impacts are the only regulations that apply to Alcoa’s use of groundwater. In accordance with RRC regulations, Alcoa would mitigate any mine-related impacts to a water supply. The projected drawdown impact areas are illustrated in Figures 3.2-5 through 3.2-8 of the Draft EIS. Please see the response (5th bullet) to comment 76-32 relative to Table 3.2-5. Also see the response to general comment NEPA-3 in Section 4.5.1 of the Final EIS relative to the Alcoa/SAWS and CPS/SAWS contracts.

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rather than merely contemplating them in Section 3.2.3.2 and 3.2.3.4, for the Calvert Bluff and the Simsboro aquifers.

Alcoa has incurred mitigation responsibilities to date only in relatively sparsely populated areas with relatively low water demands. Yet there are documented cases of Alcoa's resistance to assuming responsibility for mitigating a compromised water supply in connection with the Sandow mine. It has been estimated that Alcoa has mitigated roughly one-third of the complaints it has received (see RRC unsuitability proceedings, 2000-2001). The burden of mitigation will enter a new realm in the case of the region to be affected by the Three Oaks Mine, given the overlay of the San Antonio contracts, burgeoning, even explosive population growth, and attendant unprecedented demands on the aquifer, including another 40 or more years of Sandow pumping.

Therefore, the ability to blame other users as the primary cause of water quality or quantity degradation will be available to Alcoa, thus shifting a cost-prohibitive burden of proving damage onto middle- and low-income families. One must ponder the absurd result that, if pumping at Sandow no longer carries a mitigation obligation, Alcoa could essentially blame themselves for well damage and disclaim liability under the Rule of Capture. If, as is widely believed, Alcoa has already entered into agreements with large water suppliers and municipalities to mitigate their damage on negotiated terms — which would seem to be the only logical “affected users” mentioned in Section 2.5.1.2 (p. 2-30) who might have facilities to receive depressurized Simsboro water for mitigation — Alcoa's willingness to incur additional expense for small well mitigation could easily be compromised. “Local water supply systems” were in fact the only potential local recipients who might be mitigated with this method identified by Alcoa to USACE (Hodges 2002). The USACE and its consultants should have inquired how and on what basis Alcoa will determine the “right” to mitigation beyond this limited avenue.

76-38

The DEIS takes notice that the “Alcoa-SAWS contract stipulates” that San Antonio has “agreed to adhere to the same groundwater well mitigation requirements as lignite mining operations (i.e. mitigation for well impacts caused by the drawdown of groundwater pumped for SAWS)” (p. 2-82). The DEIS's conclusory reference to some sort of independent duty on the part of San Antonio indicates once again absolute reliance on Alcoa's version of the “facts,” and a lack of diligence to independently determine the accuracy of the statement. The USACE and its consultants should read Section 6.01(a)(4) of the contract. In fact, Alcoa's mine manager made statements similar to the version in the DEIS to the Hearings Examiner in NFN's unsuitability proceeding, even alluding to the likelihood that San Antonio could be induced to formally assume such responsibility in any mining permit for Three Oaks (RRC unsuitability proceedings, 2000-2001). Contract Section 6.01(a)(4) does not independently obligate San Antonio as the DEIS infers; rather it obligates San Antonio to reimburse (i.e., indemnify) Alcoa for Alcoa's costs of mitigation related to mining effects due to withdrawals of water for San Antonio, nothing more, nothing less. Non-mining water that may be pumped by CPS would not appear subject to any rule other than the rule of capture, perhaps tempered by LPGCD regulation. It should also be noted that the enforceability of San Antonio's promise as a public entity to indemnify a private entity may be subject to legal question.

And yet the DEIS includes the above-quoted statement as part of a “reasonably foreseeable future action,” thereby inducing public reliance on the likelihood that, even if Alcoa asserts it has not compromised a water supply in the vicinity of Three Oaks, perhaps the deep pocket of San Antonio

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would be available to the affected user. The USACE should require additional mitigation measures that clearly define San Antonio's role and duty to mitigate, since RRC saw no need to offer the public anything but the miner's promise to cure in its permit proceedings.

Relative to mitigation concerns and Table 2-16, the PDEIS provided to Alcoa in March, 2002 reveals some interesting changes to the DEIS, apparently influenced by Alcoa in the review process. Table 2-16 as included in the DEIS omits an entire column labeled "Monitoring/Mitigation" that was cut from the Impact Summary contained in Table 2-16 of the PDEIS. In that column, under "Changes in recharge to aquifer," the PDEIS stated, "[M]onitoring and mitigation of recharge impacts are not possible. This impact is an unavoidable impact that may last for approximately 40 to 100 years in the outcrop area of the Simsboro west of the Three Oaks Mine." Alcoa's requested edit was to say simply, "Monitoring of outcrop areas will be conducted." The USACE apparently chose to omit the entire discussion rather than resolve the obvious contradictory conclusions drawn by USACE and Alcoa on such an important issue.

76-38

In addition, the DEIS omits an entire "Resource/Impact Issue" that was included in Table 2-16 of the PDEIS. Rather than only two such issues, the PDEIS included a third, "Changes in recharge to aquifers." Under "Impact" of the "Proposed Action," the PDEIS table stated, "Groundwater declines in the recharge area of the Simsboro aquifer that exceed 50 feet or more may reduce recharge to the aquifer until groundwater levels can rebound after cessation of mining. No impact to recharge in the Calvert Bluff is expected." Alcoa, in its handwritten edits, changed "may reduce recharge" to "may slightly increase recharge." With respect to recharge in the Calvert Bluff, Alcoa asked for "No significant impact" again.

As a final matter related to mitigation measures that should be included in any permit, the USACE should explore the merits of requiring that the withdrawal sites for the 40,000 AFY (assumed for purposes of USACE's modeling to come from Milam County, a mistake in and of itself because it omits Lee County sites) could be shifted to other less sensitive portions of the aquifer with resulting lesser impacts on groundwater levels.

Section 3.2.1.2, State and Local Water Resource Management indicates an unfounded optimism that coordination among interested agencies has occurred or will occur.

76-39 Comment noted.

76-39

As noted above, LPGCD in particular and GCDs in general are conspicuously absent from the DEIS's discussion of "state and local resource management organizations" and its discussion of the "Rule of Capture" in Section 3.2.1.2. Further, the DEIS states that TNRC (now, the Texas Commission for Environmental Quality or "TCEQ"), as the State's primary water quality regulatory agency, coordinates its activities for the coal mining industry with RRC. NFN did not find this to be true as it proceeded on the tandem tracks of RRC (mine permit) and TCEQ (wastewater discharge) proceedings. Rather, TCEQ did not seem to keep track of developments on the RRC side, in particular the filing by Alcoa of a number of supplements that went beyond answering deficiencies identified by RRC staff to amending and revising the mine plan. Perhaps that lack of awareness was due to the fact Alcoa did not appear to update any element of its TCEQ application in light of RRC changes, for example to increase the amount of lignite to be taken annually.

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Despite the likelihood that increases in lignite removal would have an impact on wastewater discharges, Alcoa appears not to have informed TCEQ and TCEQ appears not to have identified the change upon any independent monitoring or review of the RRC permit. Source documents do not seem to indicate any degree of actual coordination between RRC and USACE, or TCEQ and USACE. No contact with Lower Colorado River Authority (LCRA) and Brazos River Authority (BRA), the surface water agencies most affected by Alcoa's wastewater discharges, seems to have occurred at all, at least not until LCRA and BRA officially inserted themselves as parties in the wastewater proceeding and USACE's proceedings, apparently out of concern those authorities would have to "monitor" the formal proceedings in order to be informed. Coordination of permitting and regulatory authorities does not appear to have happened; however, the reader is clearly encouraged to believe this is the case.

The DEIS states:

76-39

Compliance with these regulations and programs, and agency requirements for project reviews and approvals, would reduce the potential for impacts to water resources. The effectiveness of the proposed project activities for the Three Oaks Mine with respect to these regulatory programs was evaluated in the impact assessment, as applicable. (p. 3.2-8)

NFN, the Bastrop County Environmental Network (BCEN), and members of the general public have raised a number of significant issues and deficiencies in public comment on the TNRCC (now TCEQ) TPDES wastewater discharge permit. None of the issues and alleged deficiencies have been disposed of by either TCEQ or the Administrative Law Judge for the hearing on the permit, scheduled for January, 2003. Accordingly, the USACE cannot rely on Alcoa to resolve the impact that ultimate resolution of these issues may have on the conclusions reached by USACE in the final EIS. These issues must be considered by USACE and its consultants before moving forward with the finalization of the EIS. Copies of NFN's public comment have been previously provided to USACE and are incorporated herein by reference for consideration by USACE. USACE has also been provided a copy of, and is encouraged to consider, BCEN's extensive comments on the TPDES permit.

76-40

Another area of concern between agencies is whether the life-of-mine model of groundwater impacts provided by Alcoa and used by USACE is the same model upon which RRC relied in approving the issuance of a mining permit. Section 3.2.3.2, for example, raises this question when it states on page 3.2-28 that Harden used the "numerical groundwater flow model developed for the Three Oaks Mine to estimate the time required for the Simsboro aquifer to recover from mining operations" (reported as not fully achieved until 100 years after cessation of mining). Presumably, the model used for the DEIS included demand for non-mining purposes whereas the RRC did not feel constrained to include any non-Three Oaks impacts other than the Sandow mine impacts. However, it would appear this is the only defensible difference between the two models. The USACE should therefore demonstrate its confidence in the coordination among agencies by specifically describing and explaining any differences in drawdown results between the two models. The USACE should then demonstrate confidence in the state of the art modeling it should have achieved by a similar comparison of its results with the GAM to be delivered in January 2003 – that

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The Three Oaks LOM Model used in the EIS is the same model used by Alcoa for its RRC mine permit application. Modeling conducted with the LOM Model used only pumpage from the Three Oaks Mine area. The Three Oaks LOM Model is a site-specific model. The GAM is a regional model. They cannot be compared or merged. The estimated time for aquifer recovery using the Three Oaks LOM Model assumed no other pumpage from the aquifers. The purpose of using the Three Oaks LOM Model was to show the limit of Alcoa's potential impacts on groundwater due to pumpage at the Three Oaks Mine. The cumulative impact section of the EIS includes the potential impacts due to regional municipal pumpage. The boundaries of the Three Oaks LOM Model are consistent with the areal distribution of potential impacts from Three Oaks. The boundaries of the Modified Region G Model are those of the cumulative effects area as defined for the EIS. Faults in both models were treated as low permeability zones, not as boundaries. This is consistent with field test data that show the faults behave as low permeability areas. Also, groundwater modeling showed that pumpage in the Calvert Bluff and Simsboro aquifers would not affect water levels in the Carrizo aquifer. This is consistent with field studies and data presented in the EIS and Alcoa's RRC mine permit application.

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is, USACE's model parameters should be input into the GAM to determine if replication of results under that model can be achieved.

Section 3.2.3.2, in relying on Harden's RRC modeling, raises a more basic question. If modeling for RRC was limited to Three Oaks and Sandow mining impacts (with Sandow's mining demand going to zero in 2005 and thereafter), are the above conclusions about timing of the aquifer's partial and full recovery from mining operations a realistic picture of where the aquifer will be in 100 years, given that the number of years estimated for full recovery does not take into account non-mining demand? The DEIS's conclusion that the aquifer will completely recover in 100 years (page 3.2-28) is seriously called into question for this reason, coupled with the concern that it also relies on "cessation of depressurization pumping" when in fact withdrawals equal to or greater than such depressurization pumping would presumably continue under the San Antonio contracts.

The integrity of the boundaries selected for modeling groundwater level impacts for the DEIS should be examined, and consistency should be achieved between boundaries for modeling and the criteria for evaluation of impacts of the mining project on endangered species. NFN, a non-profit, citizen's group, does not have the resources to employ hydrology experts to evaluate Alcoa's modeling for the DEIS. The lay reader of the DEIS is left, however, with the impression that the boundaries of the model used by USACE were arbitrarily drawn and/or inconsistently applied, a concern that can be verified by reviewing the USGS' comments on the life-of-mine model. NFN urges that independent expert review of the model, if any is offered, be seriously considered.

76-40

We also note that Section 3.2.3 addresses the existence of geological faults in the Three Oaks and Sandow Mine areas. The DEIS states that such faults have "low permeability" and "generally act as barriers to the horizontal flow of groundwater in the aquifers." It is not clear, however, whether such faults were taken into account as boundaries in the groundwater modeling. A further reason to examine why geological faults should be used to set boundaries for modeling is that Alcoa has emphasized the impermeability allegedly produced by such faults to bolster its argument that the absence of significant interformational leakage, coupled with the displacements caused by faults, makes it virtually impossible that dewatering and depressurization activities would affect the Houston Toad, found primarily in the Carrizo formation. Alcoa should not be able to have it both ways – the effect that impermeable barriers have on modeling should be clearly addressed in the DEIS.

The DEIS's analysis of the potential impacts on the Houston Toad is considered outside the scope of these comments, but it appears from the Summary (page ix) that the USACE's review has been limited to a consideration of whether "mine-related discharge to Middle Yegua Creek reaches the floodplain that bisects the Carrizo outcrop." The USACE apparently concludes there is not enough suitable habitat in the alluvial floodplain and not enough potential for "flow alteration at the Carrizo outcrop" to warrant concern for the Houston Toad (page ix). Elsewhere in Section 3.2, USACE concludes that the hydraulic separation of the Simsboro and Calvert Bluff aquifers from the Carrizo aquifer warrants a conclusion that there is no chance that the Carrizo's water quantity or quality, or its prolific seeps and springs, will be affected by Three Oaks Mine. This same conclusion is relied upon in the Vegetation section to dispose of, in a single sentence, any threat to the Lost Pines of Bastrop County.

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The DEIS does not adequately address the effect on groundwater and surface water quality of Alcoa's mining and disposal activities and completely fails to address the potential effects due to Alcoa's "recycling" activities intended for Three Oaks mine and currently in use at Sandow.

Alcoa's mining permit application was amended to increase potential "maximum" annual lignite production to 8,000,000 tons per year because of fuel quality needs of the Sandow power plants. That is, Alcoa needed to increase its potential mining production to account for the possible need to mine larger areas to find higher quality (i.e. lower ash content) lignite to blend with seams of marginal quality lignite. Alcoa 2002c (Supplement 3, p. .139-4, .139-8) Supplement 3 indicates the accompanying need to spoil higher ash lignite if blending cannot be accomplished. (p. .139-8). The possibility of millions of tons of lignite sitting in spoil piles for up to 25-30 months under a variance from the normal RRC requirement of a 6-month reclamation schedule raises the specter of much greater impacts due to run on and runoff over such an extended period. The DEIS should assure that resulting storm water runoff will be adequately handled at Three Oaks. The DEIS also does not consider, but should, the effect of returning unconsolidated lignite to the mine pit.

Alcoa's intended disposal of bottom ash in the mine pit after its use as road base, and its euphemistic reference to "recycling" of additional coal combustion waste in the Three Oaks and Sandow mine pits, is generally outside the scope of comments on ground and surface water impacts. However, the potential for degradation of the quality of groundwater, by infiltration from the mine pit, and surface water, at least from discharge of mining-related waters, has been inadequately studied for purposes of the DEIS. The DEIS appears to have only considered the use of bottom ash for road surfacing which would then be converted to backfill in the mine pit (p. 3.2-29). The USACE does not appear to have examined Alcoa's apparent self-characterized "recycling" of coal combustion waste into the mine pits, perhaps in massive quantities which may be expected to *increase* when additional pollution controls are installed on Alcoa's Sandow power station. That is, the DEIS does not address the actual point of *delivery* of Sandow station waste that the DEIS notes is loaded into dump trucks for offsite transport. It is not clear whether leachate testing upon which the DEIS relies to conclude that leachate produced from road surfacing is not hazardous waste would also be dispositive if the presence of millions of tons of coal combustion waste was also considered.

Seemingly contradictory statements of Alcoa on these subjects should be considered by the USACE. The Three Oaks Mine Permit Application Supplement 1 (Errata-28) includes this comment from RRC staff, under Technical Deficiency 61: "The information provided does not include an explanation of why the use of bottom ash material is necessary to achieve approximate original contour (AOC), nor does it include a mass balance to demonstrate that the requirements of the performance standard found in §12.385 regarding AOC cannot be met without the use of this addition [sic] material." Alcoa's response was: "Section .139 has been modified to indicate plans to use bottom ash only as a road surfacing material. Bottom ash is not necessary to achieve AOC." However, among supporting documents for the DEIS listed under "Hodges 2002," e-mail exchanges among Randy Waclawczyk (Alcoa), Berney Williams (Weir-IMC at Alcoa) and Russ Moore (ENSR) includes a series of statements, from Mr. Waclawczyk as follows:

At this point, there is not a landfill proposed for the 3 Oaks Mine Permit Area. If a landfill is required, Alcoa will pursue it in accordance with TNRC regulations...Material that is allowed to be re-used for beneficial use or

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76-41 Please see the responses to general comments PA-1 and PA-2 in Section 4.5.3 of the Final EIS relative to bottom ash. Please see the response to comment 78-22 regarding clarification of proposed lignite blending.

76-41

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recycled by TNRCC will be recycled, which may include placing the materials in the pit to bring the land back to approximate original contours. This typically includes materials that meet the definition of a Class 3 type waste . . . The bottom ash is not *disposed of* in the mine pits. Bottom ash [sic] is *recycled* into the mine pits as a *beneficial re-use* to bring the land back to its approximate original contours. Any characterizations of bottom ash *disposal activities* in the mine pits are wrong. (emphasis added)

76-41

The reader is left to wonder whether USACE even attempted to have a clear understanding of what material is being “disposed of” or “recycled” into the mine pit. In any event, the DEIS does not adequately address the potential for groundwater and surface water quality impacts from any of these practices, despite acknowledging that more than *875,000 tons/year* of bottom ash are being “recycled”. The DEIS also seems not to have considered that, while the surface roads are in place, stormwater that includes runoff from roads will be discharged to area streams, along with contributions from high ash lignite in spoils.

The DEIS does not adequately address degradation of groundwater and surface water quality which will result from these practices. The failure to include consideration of an alternative that does not allow use of coal combustion waste as mine pit fill, or in the alternative to require long-term (beyond mine life) groundwater monitoring, is arbitrary and capricious.

Service roads will be subject to run-on and runoff from precipitation events, and such storm water will ultimately be discharged to area streams, according to Alcoa's mine plan. If the undisturbed portions of the aquifer have higher horizontal permeability than the mine pit, as Alcoa seems to acknowledge in Alcoa 2000 (Volume 10), the DEIS conclusion that burial of bottom ash in the pit will not degrade water quality in the undisturbed Calvert Bluff is called into question as an unsupported conclusion. The conclusion gains no support from the DEIS's further conclusion that recharge to the Calvert Bluff would partially come from “infiltration of water from the end lakes” (p. 3.2-26 and 27).

76-42

It is not unreasonable to expect that leachate containing mercury, arsenic, barium, selenium and other heavy metals as well as other constituents present in Alcoa and TXU's coal combustion wastes such as dioxins, furans and radionuclides, would accumulate in the end lakes. If millions of tons of “recycled” coal combustion waste is factored into the leachate equation, the potential for dangerous levels of such substances must be considered. Failure to adequately consider what is going into the mine pits for purposes of USACE's final analysis is arbitrary and capricious and represents an abuse of discretion on the part of the USACE, especially considering the enormous volumes of waste that are apparently at issue.

The inclusion in EPA's Toxic Release Inventory of an average of 2500 tons as Alcoa's annual barium disposed of illustrates the need for analysis if “disposal into other landfills” in TRI's terms means “recycling” into Alcoa's mine pits. Selenium, as a byproduct of almost all elements of the use of lignite as a fuel from the lignite itself to stack discharges to concentrations in bottom ash, is of concern when Alcoa Sandow releases are considered. Selenium would be expected to occur at the adjacent Three Oaks Mine if Alcoa continues its recycling activities at the Three Oaks mine, as proposed by its surface mining and reclamation permit application. Selenium disposal by Alcoa at

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76-42 Please see the responses to general comments PA-1 regarding ash recycling and disposal in Section 4.5.3 of the Final EIS and SW-5 regarding use of TRI data in Section 4.5.5 of the Final EIS.

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“other landfills” according to the TRI has nearly doubled every year; Alcoa was the largest source of selenium releases in 2000. If the contribution of TXU’s Sandow unit #4 were included in the analysis, the combined discharges of barium, selenium and other pollutants would be of a magnitude that could not be ignored.

76-42

Clearly, the DEIS has to re-examine these circumstances vis-a-vis groundwater and surface water impacts. Further, since Three Oaks would be expected to produce selenium releases along with releases of other heavy metals, additional mitigation measures imposed by USACE must at a minimum include some form of engineering controls in the mine pits (e.g. liners and a leachate collection system) along with long-term monitoring in a form that does not now exist with respect to Sandow (e.g. there is no monitoring of selenium or any other heavy metals at the Sandow mine site to determine if groundwater is being adversely affected by these activities. However, the discontinuation altogether of such disposal practices is an imperative mitigation measure that the USACE should address in order to minimize impacts on the jurisdictional waters of the U.S. After all, the EPA and TCEQ require that municipal garbage dumps be lined and monitored for releases of hazardous constituents in order to protect groundwater quality in the state; we should expect no less for facilities that are managing millions of tons of industrial, coal combustion wastes especially since the EPA has recently determined that these wastes can and often do contain significantly elevated levels of mercury, arsenic, selenium, chromium, barium and other heavy metals as well as dioxins, furans and naturally occurring radioactive material.

The DEIS fails to adequately consider the interaction of surface and groundwater in the outcrop areas of the central Carrizo-Wilcox Aquifer.

76-43

The DEIS does not adequately address the interaction of surface and groundwater in the Simsboro outcrop. The document is overly optimistic that discharges from the mine will make up for any losses to area streams due to groundwater withdrawals. The DEIS states, “Below [monitoring station] LBS, USGS stream gage data indicate that the reach is generally losing flow to the Simsboro outcrop in the pre-mining condition. During the life of the mine, baseflow reductions largely would be outweighed by additional contributions of dewatering and depressurization discharges at TPDES Outfalls 002 and 003 . . .” (p. 3.2-80). However, the DEIS also states, in several places, that approximately 300 to 1300 acre-feet of dewatering well water will be produced annually during the life of mine. The mine plan indicates this amount to average 633 acre-feet per year during the first 5 years. Such dewatering water would be routed to “temporary storage ponds” for use in dust suppression and truck washing. On-site operational needs will call for approximately 950 to 1300 acre feet per year, and if dewatering water is not adequate, depressurization water will make up the difference. It appears that all of the dewatering water, and some depressurization water, will be dedicated to on-site uses. Therefore, additional contributions of dewatering and depressurization discharges at TPDES Outfalls 002 and 003 seem not so assured to outweigh baseflow reductions due to mining. This seems especially true if excess depressurization water to be delivered to San Antonio may in fact *never* be delivered to the outfalls but instead is delivered by pipeline.

In fact, the DEIS states that, starting in 2013, all depressurization water not needed for on-site operations will be piped to San Antonio under the SAWS contract. This appears to leave the

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76-43

Based on estimates from baseline monitoring, the contribution to surface flows from the Simsboro outcrop adjacent to the permit area is likely to be small, typically on the order of 0.5 cfs or less in the headwaters of Big Sandy and Middle Yegua Creeks. Even in higher flow years (e.g., 2001 and 2002), the baseflow contributions may be approximately 1 cfs along the major drainages, and less in the smaller tributaries at higher elevations along the outcrop. Almost all of the streamflow regimes result from precipitation and are highly affected by evapotranspiration demands. Existing channels commonly go dry or have flows that are too small to measure in the summer and fall months. As a result of these conditions, under the Proposed Action it is not unreasonable to expect long-term discharges of depressurization water (approximately 3 to 15 cfs) to generally compensate for the expected decreases in smaller, intermittent groundwater baseflows. These discharge estimates are based on currently anticipated pumping rates (as regulated by RRC) and industrial consumption (such as dust control). The text on pages 3.2-80 and 3.2-80a of the Final EIS has been revised to clarify this issue.

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76-43 depressurization water from mine years 2004-2012 as the only depressurization water available for discharge to area streams. If the discharges are shared equally between Big Sandy and Middle Yegua watersheds, discharges might be more minimal as an offset to losses of groundwater contribution than the DEIS leads one to believe.

The DEIS also fails to consider impacts on surface water and groundwater quality resulting from interaction of the two systems.

76-44 Further, the fact that storm water discharges, also routed through the outfalls to area streams, will likely be more substantial than depressurization water discharges, leads to questions of surface water quality impacts. The mine permit indicates much higher total dissolved solids (TDS) in runoff than in depressurization water or in area stream baseflows. Comments made to TCEQ for the TPDES permit raises concerns that total dissolved solids (TDS) will substantially increase from present levels in Big Sandy Creek. It is unclear how large quantities of storm water will be adequately treated prior to discharge to area streams, particularly during storm events. The bottom line is that surface water degradation, particularly in Big Sandy Creek but also in the Yegua system, will occur but has not been adequately considered in the DEIS. This is a critical omission.

If *gaining* streams that cross over the Simsboro outcrop turn into *losing* streams because the surface water and groundwater interaction is reversed due to groundwater drawdowns, degradation of groundwater quality will occur if surface water is pulled into the aquifer, introducing water of a quality inferior to present base flows. Again, the DEIS does not even address this potential. The DEIS acknowledges that impacts to the aquifer will take 100 years to reverse, once pumping stops at Three Oaks. The USACE needs to take a harder look at what effects such long-term impacts will have on the interaction of surface and groundwater in the sensitive outcrop areas of the aquifer, and how such impacts could degrade water quality both above and below the ground surface. At a minimum, USACE should consider additional mitigation measures to include monitoring and treatment of mining-related water that reaches surface water or enters the aquifer.

The results of mining practices at Sandow should have been considered in the DEIS in connection with potential impacts to surface water quality from the proposed Three Oaks Mine. The imposition of further safeguards is imperative.

76-45 If wastewater discharges from the proposed mine are pulled into the aquifer as described above (for example, where the Big Sandy Creek recharges the Simsboro formation downstream from the proposed outfalls), the concern for water quality, above and below ground, is apparent. The DEIS dismisses the issue by stating that all discharges will meet effluent standards included in the TPDES permit. One might naturally assume, with the level of confidence in the TPDES permitting process that USACE exhibits, that the discharges of various pollutants presently occurring at Sandow would be subjected to monitoring requirements in the draft TPDES permit for Three Oaks. However, this appears not to be the case. The draft permit issued by the TCEQ in response to Alcoa's pending TPDES application provide for no monitoring whatsoever of flow or of heavy metals or other constituents which may be present in the discharge. Alcoa is allowed in the draft permit to discharge as much wastewater as it wants whenever it wants with virtually no monitoring of these discharges. Since mining methods at Three Oaks Mine are modeled closely after those at Sandow Mine, it is appropriate to consider the practices at Sandow Mine in relation to discharge

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76-44 Please see the response to general comment SW-1 in Section 4.5.5 of the Final EIS relative to surface water monitoring. Although there would be a potential during periods of low natural flow for Big Sandy Creek to become a losing stream in the isolated areas where it crosses the Simsboro outcrop, impacts to groundwater quality are not anticipated based on the low volume of recharge that potentially could occur from this source and based on Alcoa's permitting requirements to meet TPDES permit criteria for surface water discharges.

76-45 Please see the response to general comment SW-5 in Section 4.5.5 of the Final EIS relative to TRI data.

A summary of data for barium, selenium, and manganese is presented in Table 76-45. These data are for Three Oaks groundwater (underburden & overburden), Three Oaks surface water (stations LBS and LMY) and Sandow mine discharges (Stations 2 and 7).

**Table 76-45
Selected Water Quality Table**

	Barium			Selenium			Dissolved Manganese			Total Manganese		
	Max.	Min.	Average	Max.	Min.	Average ¹	Max.	Min.	Average	Max.	Min.	Average
Three Oaks												
Underburden GW	0.1	0.02	0.05	<0.005	<0.005	<0.005	0.43	0.05	0.18	0.44	0.0	0.19
Overburden GW	0.32	0.02	0.10	0.012	<0.005	0.0029 ¹	10.4	0.03	1.47	11.4	0.0	1.66
Surface Water	0.2	0.08	0.14	<0.0025	<0.0025	<0.0025	1.9	0.09	0.55	1.95	0.1	0.65
Sandow Mine (stations 2 and 7)												
Surface Water	0.25	0.044	0.10	<0.005	<0.0025	<0.0037				2.18	0.0	0.26

All data are in mg/l.

¹Note: For this computation, the analyses that were reported below the detection limit were assumed to be one-half the detection limit and averaged with the remaining values reported above the detection limit.

In addition, as mentioned in responses to comments 78-30 and 79-3, the USACE has conducted additional investigation and discussion related to the potential for acid or toxic mine drainage. Neither is expected to occur on the reclaimed Three Oaks Mine.

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water quality to determine if additional safeguards, such as monitoring and/or treatment, should be mandatory at Three Oaks Mine.

Preliminary to that analysis should be a more thorough examination of the effects on discharge water quality that Sandow Mine has had. EPA's Toxic Release Inventory shows substantial increases in releases of manganese and manganese compounds from the Sandow mine for the years 1996-2000. The DEIS states that "[S]urface water quality issues associated with lignite mining generally involve the potential for increased sediment transport, nutrient and pesticide loading, and acid or toxic drainage resulting in increases in iron, manganese, or TDS. Sediment, metals, and metalloids can be treated through the use of flocculant or other chemical methods to reduce their concentration." (p.3.2-83)

76-45

It seems likely then that acid or toxic mine discharges are largely responsible for the elevated manganese releases at Sandow. Stated another way, absent contributions of manganese and manganese compounds in acid mine drainage, it would be difficult to explain the escalating levels of manganese at the Sandow mine. High levels of manganese in Simsboro depressurization water discharged at Sandow during those years would not seem proportional to the dramatic increases in manganese levels. Water quality issues for the Yegua system (culminating in issues for Lake Somerville) immediately arise, to be further exacerbated by the contribution from Three Oaks. Similar issues arise for the Colorado River. For these reasons, an examination of the effects of acid mine water drainage at Sandow must be performed by USACE within the scope of the proposed permit for Three Oaks in order to identify problems at Sandow Mine, *and to impose those prevention and mitigation requirements that will be necessary* to avoid or minimize the occurrence of any such problems at the proposed Three Oaks Mine.

In summary, the additional mitigation measures under consideration for surface water, as described in Table 2-15, have merit and should at a minimum be implemented in a "permit with conditions." Further, if the issues raised here are adequately considered, additional conditions will necessarily result. However, the *denial* of the permit altogether due to an inability to prevent *irreversible, permanent* harm to this region's most precious natural resource in the name of private profit must be considered.

9. Errors and omissions in analyzing "Fish and Wildlife Resources" (Summary, Sections 3.5, 3.17.5)

Overview. The DEIS provides an inadequate review of the potential impacts of Alcoa's proposed strip-mining and related water pumping plans on fish and wildlife resources in the study and cumulative impacts areas. The DEIS's findings related to fish and wildlife resources rely on flawed and unsupported conclusions regarding groundwater drawdowns and their impacts on habitat, and regarding the impacts of mine water discharges. The DEIS also is overly optimistic in relying on Alcoa's proposed monitoring and mitigation measures, particularly in regard to specially designated species and species of concern.

76-46

The DEIS's conclusions regarding fish and wildlife resources are based on overly optimistic conclusions as to the cumulative impacts of Alcoa's and related groundwater pumping on aquatic and wildlife habitats and population numbers.

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76-46

The USACE believes that the modeling conducted for the Three Oaks Mine EIS, as discussed in responses to general comments GW-2 and GW-3 in Section 4.5.4 of the Final EIS, effectively supports the impact conclusions presented in the Draft EIS for wildlife and fisheries resources. Please see the response to comment 76-43 regarding the comparison between stream flow augmentation and the effects of groundwater drawdown. Also, see the response and related text changes for comment 76-43.

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As discussed in detail in the section addressing water resources, the DEIS contains numerous errors, omissions, and misinterpretations that, taken together, significantly understate the potential cumulative impacts of Alcoa's and other groundwater pumping on the Central Carrizo-Wilcox aquifer. Credible sources (e.g., Dutton, 1999) have projected drawdowns substantial enough to affect the long-term sustainability of the aquifer and the habitats it supports. The Corps needs to reassess its conclusions regarding groundwater impacts and its related assessment of fish and wildlife impacts, particularly in regard to specially designated species and species of concern.

76-46

Even if one considers only the quantities discussed in the DEIS, the Corps has been grossly optimistic in concluding that discharges from the proposed strip mine will make up for losses to area streams due to groundwater withdrawals. Water quality impacts resulting from alteration of surface water hydrology are also consistently understated. The DEIS acknowledges that all of the dewatering well water to be pumped at Three Oaks, and some depressurization water as well, will be dedicated to on-site uses. Yet at the same time the DEIS concludes that "during the life of the mine, baseflow reductions largely would be outweighed by additional contributions of dewatering and depressurization discharges" (p. 3.2-80). Based on the description of quantities and uses of depressurization water (including piping water to San Antonio under the SAWS contract), discharges for the first five years of mining, if shared equally between Big Sandy and Middle Yegua watersheds, would average no more than about 1500 AFY for each, or about 2 cubic feet per second.

76-47

The DEIS fails to acknowledge the likelihood that, in areas where gaining streams cross over the Simsboro outcrop, substantial drawdowns could permanently reverse the direction of surface-groundwater interaction, changing those stretches into losing streams. Water from the stream will be pulled down into the aquifer if this occurs, leading to degradation of groundwater since discharges will be of lesser water quality than present base flows.

(NOTE: See the water resources section of these comments for additional information.)

The DEIS's conclusions regarding fish and wildlife resources are based on flawed assumptions and findings regarding the impacts of Alcoa's mine water discharge plans.

76-48

Alcoa has not yet obtained its required wastewater discharge (TPDES) permit from the TCEQ. That permit application has been challenged by multiple parties, including Neighbors for Neighbors, and a number of substantive issues have been brought to the attention of the TCEQ. However, in preparing the DEIS, the Corps once again has relied on Alcoa's assertions regarding the adequacy of the company's wastewater discharge plans and their potential impacts. As a result, the DEIS significantly understates the potential negative impacts that Alcoa's wastewater discharge plans are likely to have on area waterways, their associated habitats, and fish and wildlife populations. As an example, the DEIS indicates that storm water discharges, routed through Alcoa's designated outfalls to area streams, would likely be more substantial than depressurization water discharges. Alcoa's mine permit application indicates much higher total dissolved solids in runoff than in depressurization water or in area stream baseflows. USGS data for Big Sandy Creek show levels of total dissolved solids ranging from 77 to 173 milligrams per liter. Alcoa states that runoff from disturbed areas at the mine will average 1000 milligrams per liter. It is unclear how large quantities of storm water would be adequately treated prior to discharge to area streams, particularly

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76-47 Please see the responses to comments 76-43 and 76-44.

76-48 The USACE considered existing environmental regulatory programs related to permits and performance when initially assessing potential impacts. Then, further review of additional data was conducted, followed by impact analysis and development of recommended monitoring and mitigation measures. Data-based assessments have formed a major part of this project. This included review of Sandow Mine water quality data in comparison to current and proposed stream standards and background water quality. Indications are that Sandow Mine releases generally correspond to the background conditions, or are somewhat better with respect to meeting water quality standards for TDS and most other constituents. While this is not regulatory compliance per se, it does indicate that with respect to the Proposed Action, adverse direct impacts on the existing environment would be negligible for most of the water quality constituents at issue.

Please see the response to general comment SW-1 in Section 4.5.5 of the Final EIS relative to surface water monitoring. Baseline water quality characteristics of area streams are presented in Table C-12 in Appendix C of the Final EIS, based on the surface water inventory for the proposed project. As further clarification, USGS data indicate TDS concentrations of 77 to 455 mg/l for Big Sandy Creek near McDade, with an average concentration of 259 mg/l based on seven samples collected in the first few months of gaging. Nine samples were analyzed for TDS on Big Sandy Creek near Elgin in the first few months of gaging. Concentrations ranged from 106 to 236 mg/l, with an average of 169 mg/l.

Please also see the response to general comment SW-2 in Section 4.5.5 of the Final EIS regarding projections of total dissolved solids from disturbed areas.

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- during storm events. Such discharges would degrade Big Sandy Creek and its associated aquatic and riparian habitats.
- 76-48 (NOTE: See Neighbors for Neighbors' public comments to the TCEQ regarding Alcoa's proposed TPDES permit, forwarded to the USACE in June, 2002, as well as the water resources section of these comments for additional information.)
- The DEIS fails to adequately address the potential impact of the proposed strip-mining and water pumping plans on special status species and species of concern.***
- 76-49 There are a number of threatened or endangered species and species of concern occurring in the area surrounding Alcoa's proposed Three Oaks Mine. For some of these species, there is a significant likelihood of their presence within the mine permit area itself; others are known to occur within the Corps' defined study and cumulative impacts areas. The DEIS identifies these species and notes their presence and known or likely habitats. However, in every instance the DEIS concludes that the likely negative impacts from Alcoa's proposed activities and the cumulative impacts from Alcoa's and other activities would be insignificant. These findings appear to be arbitrary and capricious and fail to protect the public interest.
- 76-50 The Houston Toad is the only federally-designated, endangered species identified as present in the cumulative impacts area. The DEIS acknowledges that the presence of Houston Toads has been documented within a mile of the proposed mine permit area. Within the past decade, incidences of Houston Toad colonies have been documented in areas where, in earlier years, mining applicants had declared none to be present (see RRC unsuitability proceedings, 2000-2001). Yet the DEIS dismisses consideration of potential impacts to the Houston Toad and its habitat as inconsequential. There is no evidence that the Corps consulted with the Houston Toad work group now active in efforts to preserve and protect Houston Toad habitat in Bastrop County.
- 76-51 Moreover, source materials for the DEIS include verification of a nesting pair of bald eagles just 10 miles south of Alcoa's proposed permit area. Yet the Corps has not required any specific mitigation measures to address the likelihood that this pair and/or their offspring might be impacted by mine-related activities.
- 76-52 The PDEIS included monitoring and mitigation requirements for several species, including the timber/canebrake rattlesnake, loggerhead shrike, and migratory bird species, which would include whooping cranes, bald eagles, peregrine falcons and wood storks. Those measures, inadequate as they might have been, were dropped altogether from the DEIS distributed to Neighbors and to the public in August, 2002. Also left out of the DEIS was a conclusion in the PDEIS that the reduction or loss of available water could lead to "possible long-term impacts to population numbers" among various species (PDEIS, p. iv). This impact, of course, would be far more devastating to rare, endangered, and threatened species.
- 76-53 The DEIS is in error in assuming that Alcoa's proposed mitigation measures are adequate to protect specially designated species and species of concern. For example, there is strong and credible evidence indicating the ineffectiveness of Alcoa's search and relocation plans for the timber rattlesnake (Nowak & Van Riper, 1999; Reinert & Rupert, 1999; Sealy, 1997). Significant problems

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- 76-49 The information presented in Table F-3 (Appendix F of the Draft EIS) and Sections 3.5.1.5 and 3.5.2.1 of the Draft EIS relative to federally listed species is consistent with the Biological Assessment that the USACE submitted to the USFWS for the Three Oaks Mine. Please refer to the USFWS concurrence letter in Appendix G of the Final EIS. Also see Table F-4 in Appendix F of the Final EIS and Section 3.5.1.5 of the Draft EIS relative to the occurrence potential in the project area for species of special concern; potential impacts to these species are discussed in Section 3.5.2.1 of the Draft EIS.
- 76-50 As discussed in Section 3.5.2.1 of the Draft EIS, the conclusion of no direct or indirect impacts to the Houston toad is based on the results of presence/absence vocalization surveys, tadpole genetic analyses, absence of geologic formations typical for this species within the permit area, and the general lack of deep sandy soils in the permit area. Also, no impacts to this species would be anticipated from mine-related water level changes in the Simsboro aquifer outcrop or associated stream segments that receive groundwater contributions from the Simsboro aquifer based on the known distribution and habitat characteristics of this species. Furthermore, it is unlikely that this species would be impacted by depressurization based on the lack of appreciable amounts of suitable habitat within the alluvial floodplain of Middle Yegua Creek and the potential for flow alteration at the Carrizo outcrop. This is consistent with the information that was presented in the Biological Assessment that the USACE submitted to the USFWS for the Three Oaks Mine. Please refer to the USFWS concurrence letter in Appendix G of the Final EIS.
- 76-51 Based on the location of the nest site relative to the permit area, no direct or indirect impacts would be anticipated for the bald eagle nest site that occurs approximately 10 miles south of the permit area. This is consistent with the information that was presented in the BA that the USACE submitted to the USFWS for the Three Oaks Mine. Please refer to the USFWS concurrence letter in Appendix G of the Final EIS.
- 76-52 As described in Table 2-15 of the Final EIS, Alcoa has committed to a number of environmental protection measures including measures to protect the timber/canebrake rattlesnake and migratory bird species that could potentially nest within the proposed surface disturbance areas. Also see the response to comment 29-8. The change in wording referred to in the comment occurred as a result of ongoing analyses in other resources at the time the Preliminary Draft EIS was being prepared. Groundwater modeling and other hydrogeological analyses being conducted at that time showed that early speculation regarding the reduction or loss of available water was largely unfounded.
- 76-53 Please see the responses to comments 29-8 and 29-13.

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76-53 with this approach were noted both in the unsuitability proceedings before the Railroad Commission and in Neighbors for Neighbors' scoping comments to the Corps. The DEIS also fails to sufficiently address the potential impact of the Three Oaks Mine on endangered bird species such as the black-capped vireo, which has been documented to exist within the study area (Brown, 2001).

76-54 The Corps' omission of monitoring and mitigation measures for all of the specially designated species and species of concern mentioned above is an error that damages the public interest. Once again, the Corps' judgment appears arbitrary and capricious in its assumptions that Alcoa will leave no enduring negative imprint on the Three Oaks environment and its inhabitants.

The DEIS fails to consider viable alternatives that would make the strip-mining end lakes more conducive to wildlife after reclamation.

76-55 Marshes and shallow ponds are more effectual than deep lakes for attracting wildlife. Most feeding by birds, for example, occurs in the shallow water around the edges of ponds. As proposed by Alcoa, the end lakes are largely wasted as potential wildlife resources. Rather than simply leave these large, deep mining pits to fill up with water, Alcoa should be required to redesign the end lakes to include shallow areas, marshy areas, and shorelines conducive to attracting wildlife.

10. Errors and omissions in analyzing "Cultural Resources" (Summary, Section 3.7, 3.17.7)

The DEIS fails to address the potential impacts of Alcoa's proposed mining and associated activities on downtown Elgin's historic district.

76-56 The City of Elgin and its downtown historic district are located only 5 miles from Alcoa's proposed permit area. As noted earlier, the DEIS's consideration of location issues appears to be arbitrary and capricious; this extends to the document's failure to consider the fact that Elgin has 14 blocks and 80 buildings listed in or eligible for listing in the National Register of Historic Places. No assessment has been conducted by the USACE or anyone else on the impact of Alcoa's plans on these historic and cultural resources. There are significant concerns regarding the potential for accelerated degradation of these resources due to noise, vibration, air pollution, and vehicular traffic resulting from Alcoa's proposed plans. Alcoa's proposed changes to FM 696 and county roads would lead to increased traffic directly through the historic district. (See the transportation section for additional information.)

11. Errors and omissions in analyzing "Air Quality" issues (Summary, Sections 3.8, 3.17.8)

Overview. The DEIS is inadequate in its review of two overall areas of impact related to air quality: (1) the detrimental impacts on local air quality of the proposed strip-mining operation; and (2) the detrimental impacts on local, regional, and state air quality resulting from Alcoa's continued use of central Texas lignite coal for power production. Given the massive air emissions from Alcoa's Rockdale Operations, and given Alcoa's continuing violations of the federal and state Clean Air Acts, air quality impacts should have been a priority for examination by the the USACE. However,

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76-54 Please see Table F-3 of the Draft EIS, Table F-4 of the Final EIS, and Section 3.5.1.5 of the Draft EIS for potential occurrence of these species within the study area and cumulative effects area and Section 3.5.2.1 relative to potential impacts. Also see Table 2-15 of the Final EIS relative to Alcoa's committed environmental protection measures and additional mitigation under consideration by the USACE.

76-55 Section 2.5.3.7 of the Draft EIS states that end lakes would be designed to have a varied shoreline to encourage a wetland fringe with diversity of plant species, which would provide habitat for a variety of wildlife species. The mine-side margins of the end lakes would be graded at a slope of 6 horizontal:1 vertical, resulting in shallow water areas along the lakes. This slope change has been added to page 2-62 of the Final EIS. The Mitigation Plan in Appendix E of the Final EIS also discusses shallow planting benches that would be developed in association with the proposed sedimentation ponds.

76-56 Please see the responses to general comments T-2 and CR-1 in Sections 4.5.7 and 4.5.11, respectively, of the Final EIS relative to effects to the Elgin National Register Historic District.

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in spite of the defined “study area and cumulative effects area for air quality” specified in the DEIS, air quality impacts are given cursory, inaccurate, and ineffectual review.

The DEIS fails to adequately address the potential negative impacts of Alcoa’s proposed mining activities and falls short in specifying remedial actions to address those impacts.

In discussing impacts on air quality, the DEIS minimizes the scope and duration of air quality impacts from a proposed project with a life-of-mine span of 25 years or more. The DEIS states:

- Some air quality impacts are unavoidable due to the nature of the proposed mine operations (p. 3.8-21);
- Adverse effects would be limited spatially to distances up to approximately 7 kilometers (4 miles) from the active mine disturbance (p. 3.17-3);
- Short-term impacts to air-quality from emissions associated with mine construction and operation would have no effects on the long-term productivity of the permit area or surrounding region (p. 3.17-3); and
- Although some air quality impacts inevitably would occur during construction and reclamation, they would be transitory and limited in duration relative to the mine operations phase, and they would end at the completion of that particular phase of the work (p. 3.8-12).

76-57

However, these conclusions are not adequately supported. In its examination of particulate matter, the DEIS states that “the Three Oaks Mine site would be the largest particulate emission source in the immediate vicinity” (p. 3.8-20). The document notes that there “would be increases in TSP and PM10 concentrations in the immediate vicinity of the mine” (p. 3.8-21). Table 2-16 notes the “potential exceedence of ambient air quality standards.” The “Impact” column in Table 2-16 elaborates, “Concentrations of particulate matter less than 10 microns in diameter (PM10) and total suspended particulates (TSP) could exceed federal and state standards.”

Despite these acknowledgements, the DEIS recommends no additional monitoring or mitigation measures, relying instead on Alcoa’s closure of its Sandow Mine to accomplish emissions reductions. Such reliance is in error, and is completely insufficient to address the serious concerns for possible effects of particulate matter on health and well-being of persons, livestock and economic activity in large areas surrounding the project site. The Sandow mine is a separate project beyond the scope of the USACE’s influence. There are no guarantees that Alcoa will close the Sandow Mine in timely fashion; the DEIS itself uses tentative, equivocal language in discussing the mine’s closure (p. 1-4). Moreover, exceedence of ambient air quality standards is even more likely than the Corps has estimated because the DEIS understates the annual emissions estimates for Three Oaks Mine (Table 3.8-9). Emissions estimates are based on an annual lignite production rate of approximately 6.2 million tons (Table 3.8-8), which is the general amount produced at Sandow and currently required to fuel the four Rockdale power plant units. However, elsewhere in the DEIS the Corps assumes an annual lignite production rate of 7 million tons per year. On p. 1-6 the DEIS states, “This EIS is written assuming production could be either 6.2 or 7 million tons per year. Alcoa’s mine plan has been prepared to address either scenario.” To responsibly address potential environmental

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76-57 Please see the response to comment 80-10.

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impacts, the DEIS would need to use the larger figure of 7 million tons/year, and in fact the production schedule listed in the DEIS (Table 2-6, p. 2-19) shows 7 million tons/year for the 25-year life-of-mine.

76-57

The DEIS does note the 7-million ton rate in the narrative text within the air quality section (p. 3.8-13), a revision from the PDEIS, which showed 6.2 million tons per year. However, presentation of emissions data is identical to that in the PDEIS and is based on an annual production rate of 6.2 million tons. A 13 percent increase in lignite production means a proportional increase in removal of overburden and interburden, backfill, grading, lignite crushing, and lignite transport. It should also be noted that, in its later supplements to its RRC permit application for the Three Oaks Mine, Alcoa projected a production rate of as much as 8 million tons per year — a nearly 30 percent increase over the rate used in estimating annual emissions in Table 3.8-9.

Yet another factor that the DEIS fails to consider is the potential switch — also described in Alcoa's later supplements to its RRC mining permit — from the use of draglines to a truck-and-shovel mining operation, either with or without draglines, for at least the first three years of mining at Three Oaks. The DEIS does not evaluate this scenario at all in its emissions estimates. If the Corps had waited to conduct the EIS until after Alcoa's permit application had been declared technically complete, as Neighbors for Neighbors and others requested during the scoping process, the DEIS would (one hopes) more accurately reflect the potential impacts of Alcoa's plans.

The DEIS fails to address detrimental impacts on regional and state air quality resulting from Alcoa's continued use of central Texas lignite coal for power production.

76-58

The DEIS identifies the "study area and cumulative effects area for air quality" as comprising "Bastrop, Lee, Milam, Travis, and Williamson Counties" and by "the spatial extent of the Proposed Action and its direct impacts, as well as those areas where other reasonably foreseeable emission sources are likely to have additive impacts." As the DEIS itself concedes (Summary, xiii), "The largest point sources of gaseous pollutants in the region are the power plants and smelter at the Rockdale operations in Milam County." It is widely acknowledged that Alcoa's Rockdale power plants are among the worst industrial air polluters in Texas. Alcoa's Rockdale facility has been cited as the "Worst of the Worst" by the EPA for being in the top 20 percent of polluters in the entire country. Alcoa's lignite-fueled boilers are the largest source of "grandfathered" air pollution in Texas. According to the Environmental Defense Fund, in 1996 Alcoa-Rockdale ranked in the top 20 percent of all facilities in the US in terms of:

- total environmental releases;
- total air releases;
- total production-related waste;
- air releases of suspected cardiovascular or blood toxicants;
- air releases of suspected developmental toxicants;
- air releases of suspected reproductive toxicants;
- air releases of suspected gastrointestinal or liver toxicants;
- air releases of suspected neurotoxicants;
- air releases of suspected respiratory toxicants;
- air releases of suspected skin or sense organ toxicants; and

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76-58

Please see the responses to general comments AQ-1 and AQ-2 in Section 4.5.6 of the Final EIS relative to cumulative impacts and proposed reductions in power plant emissions.

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- air releases of suspected musculoskeletal toxicants.

76-58 Alcoa's air pollution affects air quality in the Austin metropolitan area, contributing to that city's difficulties with nonattainment of federal air quality standards. It also contributes to problems in the Dallas-Fort Worth metropolitan area, another region facing potential consequences from nonattainment. Pollution from Rockdale has even been traced as far away as Big Bend National Park. These problems merit no mention in the DEIS, even though Travis County (where Austin is located) is specifically included in the air quality study area. Alcoa's excessive emissions result from the combustion of lignite, combined with severely inadequate air pollution controls at Alcoa's power plants. The DEIS acknowledges that lignite contains higher quantities of ash and sulfur than western coal (p. 2-8). Referring to trace elements in lignite that are classified as hazardous air pollutants (HAPS), the DEIS states that their presence "...can be a cause of concern (p. 3.14-2)." The document goes on to note that "...the burning of lignite may make these trace elements available in the environment (3.14-2)."

The DEIS dismisses the issue of air pollution from Alcoa's Rockdale smelter and the four power plant units that burn the lignite mined by the company by accepting at face value Alcoa's claims that clean-up is on the way. In the last year, in the face of ongoing state and federal investigations into alleged violations of the Clean Air Act, Alcoa did announce proposed "voluntary" reductions of emissions — along with equivocations that give the company a bailout option. Careful reading of the cover letter and permit application submitted to the TCEQ shows that any improved technology would not be installed until 2007 when new legislation would go into effect forcing the company to clean up anyway, and possibly would not be installed at all if it did not prove "cost effective." This contingency means that Alcoa could choose to continue emitting massive quantities of pollutants for several more years, then close down its power units and/or the smelter rather than comply with emissions requirements.

The DEIS fails to consider what air emission levels would be if totals for Alcoa's Rockdale Operations and Texas Utilities' Sandow unit were combined, and if "upsets" were included in emissions totals.

76-59 Alcoa's arguments in favor of the proposed Three Oaks strip mine include a strong focus on Texas Utilities' (TXU's) Sandow power plant unit. Although Alcoa does not own or control this unit, the unit burns a majority of the lignite that is strip mined by Alcoa and provides power required by Alcoa's aluminum smelter. In addition, some of Alcoa's scenarios projecting the possible economic consequences of denying permits for the proposed strip mine include the shutdown of the TXU unit (see, for example, testimony of Alcoa consultant Clifford Fry during the unsuitability proceedings before the Railroad Commission of Texas), even though Alcoa would have no say in such a decision and TXU could obtain western coal as an alternative fuel source if lignite were not available. To the extent that Alcoa seeks consideration of TXU's Sandow unit in tandem with Alcoa's Rockdale Operations, that unit's impact on air quality also should be assessed along with emissions from Alcoa's grandfathered units. TXU's unit is a heavy polluter in its own right, ranking 13th among Texas' top 20 emitters of criteria pollutants in 1997 (Texas Center for Policy Studies, 2000).

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76-59 Please see the response to general comment AQ-1 in Section 4.5.6 of the Final EIS relative to cumulative impacts. Alcoa submitted reports of "upsets" at the Alcoa Rockdale power plant operations to TCEQ in compliance with 30 TAC Chapter 101. A graph depicting the frequency of occurrence of emission levels greater than 30 percent opacity is presented in Figure 76-59a. Opacity values between January 1, 1997, and March 20, 2003, were below 30 percent (permit threshold values) 99.1 percent of the time. Approximately half of the upsets involved emissions over a period of about 6 minutes, and approximately 30 percent lasted more than 1 hour. Only eleven upsets during the 6-year period lasted more than 8 hours, and virtually none lasted more than 12 hours. Note that although the opacity at the power plant was above 30 percent, these levels were reported to the TCEQ, when required, in compliance with 30 TAC Chapter 101; therefore, they were legal emissions.

Smelter emissions include both non-reportable and reportable emissions, as depicted in Figure 76-59b. The data were reviewed for the period from January 1, 1997, through February 2003. These emissions also were reported in compliance with 30 TAC Chapter 101. More than 50 percent of the upset or shutdown conditions lasted less than 1 hour, and approximately 17 percent lasted between 1 hour and 8 hours. Events that lasted more than 8 hours were nearly all shutdowns of pot lines for planned maintenance activities. Three extended-period shutdowns lasting more than 1 week are attributed to installation of new air pollution control devices, including new baghouses.

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76-59

The EIS also needs to include data collection and analysis regarding “upset” emissions from Alcoa’s Rockdale Operations and TXU’s Sandow unit. Although “upsets” are not included in emissions totals reported in the TCEQ’s annual emissions inventories, upsets add substantially to air emissions. Area residents have reported to TCEQ frequent upsets, particularly after regular working hours and on weekends. TCEQ records indicate that, in some cases, upsets at the Rockdale facilities have continued for days on end. TCEQ’s failure to inventory and quantify these upsets as total emissions is not justification for the DEIS to ignore them.

12. Errors and omissions in analyzing “Land Use and Recreation” issues (Summary, Sections 3.9, 3.17.9)

Overview. In this category, as in others, the DEIS fails to note relevant information that does not support Alcoa’s interests. As in other instances, these significant omissions could have been avoided had the Corps and its consultant chosen to consult with individuals and groups in the area that would be affected by the Three Oaks strip mine.

There are three glaring problems with the DEIS’s treatment of land use and recreation:

- the omission of any discussion regarding the City of Elgin’s land use plans, the expressed wishes of the Bastrop County Commissioners Court regarding lignite strip mining, or the effects of Austin’s “smart growth” plans;
- the omission of any discussion of how mining related activities would affect the small recreational and tourist businesses operating outside the permit area but within the defined study area; and
- the omission of any discussion on how mining related activities would affect recreational use on public roadways by area residents and tourists outside the permit area but within the defined study area.

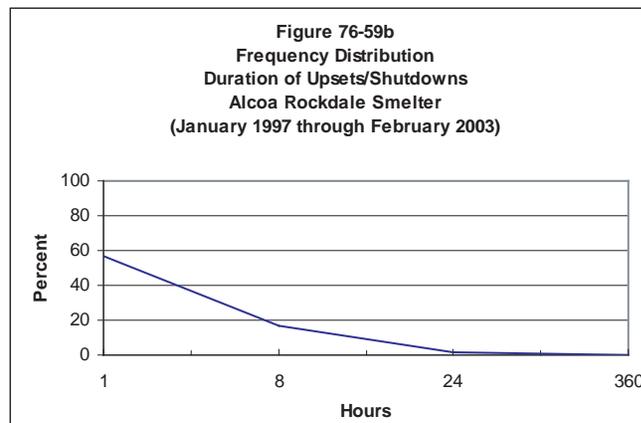
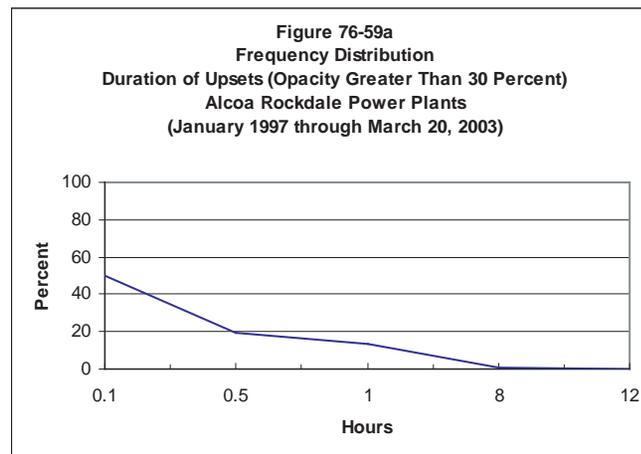
The DEIS fails to acknowledge significant sources of information regarding current and intended land use, particularly in Bastrop County.

76-60

The DEIS’s discussion on land use takes into consideration only current and historical usage patterns within a very limited area, resulting in a distorted picture of land use in the Three Oaks region. The information given appears to come only from Alcoa’s sources and does not cite any independent studies on the subject. The DEIS gives no justification for identifying a “study area” that is limited to “the permit area and nearby properties within approximately 2 to 5 miles of the permit area” (p. 3.9-1). Why not select a study area comparable to that used in the analysis of social and economic values, which addressed “approximately a 20-mile radius from the proposed Three Oaks Mine” (p. 3.10-1)? And why the variable range of “2 to 5 miles,” a range that appears to be applied in ways that accommodate the “Proposed Action” alternative, for example, by failing to note that portions of the City of Elgin and its Extra Territorial Jurisdiction (ETJ) are located within five miles of the Three Oaks permit boundary?

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The TCEQ regulations require Alcoa to submit appropriate notifications regarding “upset” emissions, including excess emissions associated with start-up and maintenance events, within 24 hours of the “upset” emission event. Alcoa submitted the appropriate documentation to the TCEQ for each of the reportable events summarized in these data.



76-60

Study areas were defined for all disciplines based on the anticipated potential for impacts. There was no evidence of potential impact on land use beyond a 2- to 5-mile distance from the permit area. The Draft EIS acknowledged the existence of the Elgin ETJ (Section 3.9.1.1) but found no evidence to suggest that the Three Oaks Mine would affect land use within the ETJ.

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76-61

The DEIS includes no discussion of the effects of Alcoa's planned lignite mining on land use plans specified by the City of Elgin, even though portions of Elgin — the community closest to the proposed mine permit area — fall within the outer limits of the defined study area. The City of Elgin has explicitly stated a desire to attract light industry, tourism, and businesses associated with Austin's growth. Elgin's 1998 Comprehensive Planning Report is a specific land use plan focused on attracting high-tech industrial development and absorbing more growth from Austin. This land use plan includes no reference to lignite strip mining as a desired industry. The Comprehensive Planning Report is nowhere mentioned in the DEIS. The DEIS also fails to note Elgin's participation in the City of Austin's "smart growth" initiatives. Concerned to protect its "smart growth" corridors east of Austin, the Austin City Council passed a resolution opposing Alcoa's strip-mining, water-pumping plans for Bastrop and Lee Counties — yet another fact omitted from the DEIS. In addition, the Travis County Commissioners Court adopted a resolution calling on Alcoa to switch from lignite to a cleaner burning fuel such as natural gas.

76-62

The DEIS fails to mention that Bastrop County has made clear its opposition to Alcoa's and San Antonio's plans for the area. Although counties do not have the authority to regulate land use, they can express their desires through non-binding resolutions and other activities. The Bastrop County Commissioners Court unanimously passed a resolution opposing Alcoa's proposed strip mine and the proposed water pumping plans involving Alcoa and the City of San Antonio. This resolution was subsequently endorsed by the city councils of every incorporated community in Bastrop County (i.e., Bastrop, Elgin, and Smithville), as well as by the Bastrop and Elgin Economic Development Corporations, the Bastrop Chamber of Commerce, and some 300 Bastrop County businesses. City and county governments in Lee County also have passed or endorsed resolutions expressing concern about the proposed water-pumping plans.

Further, a Regional Planning Committee appointed in 1999 by the Bastrop County Commissioners Court has conducted extensive land use planning for the county. In proceedings before the Railroad Commission of Texas, Committee member Tom Dureka testified that strip mining was not an acceptable part of any land use plans considered by the committee. Supporting his conclusion was a letter from Bastrop County Judge Ronnie McDonald, telling the RRC that "Bastrop County has engaged in an effort to guide the County's rapid growth... It is my view that Alcoa's proposed lignite strip mining is incompatible with our planning goals."

76-63

At best, the DEIS gives a partial, distorted view of land use in the area. The DEIS is in error in concluding that there has been little residential development in the Three Oaks mine area. In fact, there has been significant development, particularly near Elgin to the southwest, near McDade to the southeast, and near the Blue community, which has several relatively new subdivisions with tracts of 5-10 acres. Land use in the area surrounding the Three Oaks permit boundary is strongly skewed toward absorbing population growth from Austin commuters, rural entrepreneurs, telecommuters, and retirees, who seek rural amenities combined with proximity to a thriving metropolitan area. The land use programs and related economic activities of Bastrop and Lee Counties are oriented toward a diversified business and light industry base to service the region's diverse and growing population, while maintaining small- and medium-sized farming and ranching operations.

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76-61

Please see the response to general comment LU-1 in Section 4.5.9 of the Final EIS relative to local land use plans and planning jurisdictions.

76-62

Comment noted.

76-63

Section 3.9.3 of the Draft EIS acknowledges there has been a small amount of residential development in the Three Oaks Mine vicinity and that it would likely continue. For perspective, Blue, which is specifically mentioned in the comment as the host community for recent subdivision activity, is approximately 3 miles from the nearest point on the permit area boundary. It is slightly over 5 miles from the nearest point in the proposed Three Oaks Mine area, whereas it is approximately 4 miles from an active mining area at Sandow. This would tend to support the conclusion in the Draft EIS that the Three Oaks Mine is unlikely to affect land use beyond a relatively narrow perimeter around the mine area. Please also see the response to general comment LU-1 in Section 4.5.9 of the Final EIS addressing local land use plans and planning jurisdictions, which projects that most new development is likely to occur near established communities in continuance of current trends.

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(NOTE: Source materials documenting the statements in this section can be found as part of the Railroad Commission of Texas's public record related to the 1999 - 2000 unsuitability proceedings for the Three Oaks permit region.)

The DEIS contains significant errors and omissions regarding the impacts of the "Proposed Action" on recreation in the Three Oaks area.

76-64 The DEIS fails to address the impacts of proposed mining activities on area businesses that depend on recreational activities. The DEIS states that "recreation in the area is limited to private activities on private lands" (p. 3.9-4). This statement is in error. There are many recreational and tourist type businesses that are open to the public and operating within the defined study area (e.g., Ragtime Ranch, Kokopelli Stables, Star Ranch, Martin Ranch, Down Home Ranch, Elgin Christmas Tree Farm, Wolf Farms). Many more operate within the broader 20-mile radius surrounding the proposed mine permit boundary. These businesses have customers who engage in horseback riding, camping, hiking, running, bicycling, swimming, birdwatching, gardening, fishing, and many other outdoor activities. The DEIS does not address the effects on these activities of groundwater withdrawal, increased traffic, noise, dust or light pollution caused by lignite mining. Nor does the DEIS address how these effects would impact the business itself in terms of customer appeal given the business's proximity to the proposed mine.

76-65 The DEIS also states incorrectly that there are no wilderness areas in the permit area or vicinity. At least one individual in Lee County maintains a wildlife preserve on his private property. This preserve includes extensive wetlands that depend on water pumped from a private well. Moreover, the DEIS omits any discussion on quality-of-life impacts caused by mine related noise, air pollution, light pollution, groundwater withdrawals, or traffic on residents and tourists that use both private and public lands for recreational activities.

76-66 The DEIS omits any discussion of impacts of Alcoa's and related groundwater withdrawals on tourism and recreation activities in public parks within Bastrop and Lee Counties, such as Bastrop and Buescher State Parks and the Lake Bastrop Recreation Area. Groundwater withdrawals could negatively affect the "Lost Pines" as well as the Brazos and Colorado Rivers and their tributaries (Texas Parks and Wildlife Department, 2000), impacting tourist and recreational activities. Alcoa's wastewater discharges also may have a negative impact on recreation along the Colorado and Brazos Rivers, as well as at Lake Somerville. (See comments addressing the DEIS's "Water Resources" for additional documentation regarding these issues.) Since the workforce for Three Oaks "would not generate new population-related demand for recreation facilities" (p. 3.9-5), it is important to determine the impact of Alcoa's proposed mining related activities on recreation and tourist oriented businesses in the study area.

The DEIS fails to address the potential impacts of the proposed Three Oaks mine on recreational use related to the use of public roadways.

Many local residents, as well as tourists and visitors from Austin, engage in daily outdoor activities that involve the use of county and state roads, such as horseback riding, bicycling, walking, and running. The annual Lance Armstrong Ride for the Roses uses FM 696 as a major part of its route. There are also organized trail rides that use both state and county roads in the study area.

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76-64 Please see the response to comment 76-60. The private facilities identified by the comment as commercial recreation businesses have been investigated. The nearest, other than the Star Ranch, which was addressed in the Draft EIS, is at least 7,000 feet from the disturbance area and 8,000 feet from the mine Area (Wolf Farms). The Ragtime Ranch was approximately 7,600 feet from both the disturbance area and the mine area; others are all at greater distances from proposed project activities. At these distances, the maximum noise levels would be at or below 47 dBA (Table 3.12-10), and visual effects would be similar to those illustrated in Figure 3.12-4. Night lighting would be noticeable, but would not be dominant at the distances noted, except under certain overcast meteorological conditions. Traffic increases would be very minor in most cases, as indicated in the Draft EIS regarding traffic on FM 619, and in the responses to general comments T-1 and T-2 in Section 4.5.7 and specific comment 76-78. Dust levels would not exceed Ambient Air Quality Standards assuming mitigation measures would be applied as recommended (see Section 3.8.2.1). Considering the results of these analyses, it is expected that any adverse effects on the commercial recreation operations noted would be minor.

76-65 The term wilderness in a federal EIS refers specifically to federally owned lands designated by Congress as Wilderness Areas under the Wilderness Act of 1964. Such lands are "... area(s) where the earth and its community of life are untrammeled by man ..."; they must by law be at least 5,000 acres in size except in very unusual circumstances. Privately owned wildlife preserves do not qualify as wilderness. Noise, air quality, light, groundwater, and traffic were all addressed in their respective sections in Chapter 3.0 of the Draft EIS.

76-66 Please see the responses to general comments GW-6 and GW-7 in Section 4.5.4 of the Final EIS relative to potential impacts to the Colorado River and Lake Bastrop, respectively. Please also see the responses to comment 76-64 regarding recreation-oriented business in the study area and comment 59-26 regarding recreational use of local and state roads.

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13. Errors and omissions in analyzing "Social and Economic Values" (Summary, Sections 1.1.1, 3.10, 3.17.10)

Overview. In its assessment of the "environmental consequences" of the "Proposed Action" vs. "No Action" alternatives as they related to Social and Economic Values, the DEIS contains numerous flaws, errors of facts and omissions. Three major, interrelated, problems are of particular significance: the failure to address the influence of the City of Austin on the Three Oaks region, particularly Bastrop County; the presence of gross errors in the application of the IMPLAN model; and the failure to assess the potential negative economic impacts of the "Proposed Action." Any one of these flaws would be sufficient to call into question the DEIS's findings. Together, they negate the validity of all the DEIS's conclusions regarding the economic impacts of the "Proposed Action" vs. "No Action" alternative. There are other significant flaws as well. The Corps needs to undertake a new, more comprehensive assessment of the economic contexts of Bastrop and Lee Counties, removed from the artificial construction of a three-county "regional economy."

The DEIS completely disregards the influence of the City of Austin's population growth and economic trends on the region of the proposed Three Oaks Mine, particularly on Bastrop County.

The city limits of Austin are a mere 20 miles from the permit boundary for Alcoa's proposed Three Oaks Mine, a fact the DEIS fails to note in describing the "Project Location" (section 1.1.1, p. 1-4). Even the area map included in the DEIS (Figure 1-1) is incorrect; the map fails to show the correct city limits for both Austin's eastern edges and Elgin, giving the impression of greater distance from the strip mine than actually would exist. In addition, Bastrop County is one of five counties included in the Austin Standard Metropolitan Statistical Area (SMSA), a significant fact also omitted from the DEIS. It is dismaying to find in Section 3.10 of the DEIS absolutely *no* references to the influence of the City of Austin on the Three Oaks area.

76-67 The DEIS presents a variety of statistical data for Bastrop, Lee, and Milam counties, aggregating the data with the rationale that substantial portions of all three counties are contained within the 20-mile radius "study area for social and economic values" (p. 3.10-1). The document's narrative lumps these three counties together at every turn, even though the counties themselves do not do so⁵ and even though in virtually every statistical category there are significant differences among the three. For example, the DEIS states:

In the 1990s, the three counties' combined population growth clearly outpaced the overall statewide growth rate. Bastrop County continued as the driving force in terms of actual numbers as well as having a sustained high growth rate, but Lee and Milam Counties also experienced notable increases in their rates of growth (p. 3.10-1).

In fact, Bastrop County was the only one of the three counties whose growth rate exceeded the state average. A reader of the DEIS must consult the statistical tables to see that Bastrop

⁵ Reports on unemployment, population growth, etc. in Bastrop County newspapers also list information for Lee and other adjacent counties, but not for Milam County. Nor do such reports for Milam County list information for Bastrop County.

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76-67 Please refer to the response to general comment SE-2 in Section 4.5.10 of the Final EIS relative to the presentation of aggregated data and the response to general comment SE-1 in Section 4.5.10 of the Final EIS addressing local land use plans and planning jurisdictions. The discrepancy in population forecasts between sections of the Draft EIS resulted from new Texas Comptroller of Public Accounts forecasts being received after Section 3.10.1.1 was prepared. Both sections have been updated for the Final EIS with subsequent forecasts from the Texas Comptroller of Public Accounts. Please see the response to comment 76-23 regarding the map used for Figure 1-1.

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County's growth rate of 50.9 percent for 1990 - 2000 more than doubled the statewide growth rate of 22.8 percent. Milam County's growth rate, in contrast, was only a fourth of the statewide average, at 5.6 percent. The "notable increase" in Milam County's rate of growth was the improvement from a barely perceptible .9 percent growth rate for 1980 - 1990 to a still-sluggish 5.6 percent for 1990 - 2000. The DEIS also notes that "the three counties' combined population is expected to outpace the statewide growth rate [between 2000 and 2030], with Bastrop County forecasted to be responsible for most of this growth" (p. 3.10-2). A look at the statistical table accompanying this statement shows a projected *decline* in Milam County's total population for each decade between 2000 and 2030. (It should be noted that, in section 2.6.2.5 of the DEIS, an entirely different set of growth figures is given for each of the three counties; see p. 2-83.) In virtually every statistical category, Bastrop County reflects the most strongly positive economic circumstances, with Lee County hovering near statewide averages and Milam County trailing far behind. For example:

- Bastrop County accelerated its growth rate in labor force participation between 1990 and 1997; Lee County's growth in labor force participation was somewhat smaller, while Milam County showed a decline. As the DEIS notes in euphemistic terms, Milam County's rate of labor force participation had "slipped lower by 1997" (p. 3.10-2).
- The number of employed persons in Bastrop County grew by more than 40 percent between 1990 and 1997. Lee County experienced a 17.4 percent gain, "while employment in Milam County remained relatively constant over the 7 years" (translation: a -2.6 percent change).

The only category in which Milam County leads is in "total industry earnings per labor force participant," with a figure that consistently doubles that of Bastrop County. Quoting — without attribution — a report by Alcoa consultant Lonnie Jones (2002), the DEIS concludes, "The higher income per labor force participant for Milam County helps explain why Milam County has the lowest, and declining, labor force participation rate, as higher income jobs reduce the pressure for multiple worker households" (p. 3.10-8). However, the DEIS fails to note another statement in Jones's report:

76-68

Department of Commerce statistics show that 56 percent of the net earnings in Bastrop County were earned by workers who live in the county, but have a place of employment elsewhere (USDC, 2001). This trend will likely continue into the future as more people reside in Bastrop County, but earn income in Austin and Travis County. (Jones, 2002, p. 15)

Bastrop County's 50 percent lower industry earnings per labor force participant, then, does not demonstrate lower actual earnings among Bastrop County residents. Rather, it merely reflects a procedural anomaly: for this statistic, a substantial portion of Bastrop County residents' earnings would be recorded not for Bastrop County but for Travis County, where the industries are located. In fact, earnings by residents who commute to Austin are a substantial economic boon to Bastrop County, as they are in other rural areas with high percentages of commuter residents. As rural economists Jan and Cornelia Flora (1991) have noted, "Commuters bring... money back to their county of residence, which then turns over several times in the community, thereby generating jobs" (p. 144).

76-68 Comment noted.

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76-69 Although the Corps stretches to attempt an explanation, however flawed, for Milam County's poor labor force participation rate, it makes no effort whatever to account for Bastrop County's burgeoning growth. *Nowhere* in the section on "Social and Economic Values" is there any reference whatever to the fact that Bastrop County's tremendous growth — and, to a lesser extent, that of Lee County — is directly linked to the City of Austin's growth in population and economic activity. This glaring and inexcusable omission cannot be accounted for by the section's heavy reliance upon the Alcoa-commissioned report by Jones because that report, however flawed its analyses, explicitly acknowledges Austin's influence. Jones notes that Bastrop County is included within the Austin SMSA, describing Bastrop County as "the county in closest proximity to the city of Austin" (p. 9). He states that "population growth over the last decade within the [three-county] study area clearly indicates the influence of proximity to the City of Austin" (p. 9). Such influence, Jones concludes, is heaviest in Bastrop County; "Lee County growth reflects some but lesser influence from the Austin SMSA, and Milam County was affected little if any by the spread of the Austin SMSA" (pp. 10-11).

In chapter 2, the DEIS does briefly mention Austin's influence on the Three Oaks region. On p. 2-66, the DEIS notes "reasonably steady population growth" (an incongruous characterization for an area that includes the nation's 30th fastest-growing county), "with increasing numbers of residents commuting to jobs in the Austin metropolitan area." And on p. 2-83, in discussing "Future Population Growth," the DEIS states:

The difference in growth pressures among the three counties is likely related to the proximity and ease of access from Bastrop County to the rapidly growing Austin metropolitan area. Neither Lee nor Milam Counties is in a comparable location with the access afforded by U.S. Highway 290. [This last statement is in error; U.S. Highway 290 crosses southern Lee County, running directly through the county's largest city, Giddings.]

Given these statements elsewhere in the DEIS, as well as the information in a source document (Jones, 2002) used extensively in addressing economic impacts, the DEIS's failure to address Austin's critical influence in chapter 3 cannot be a matter of ignorance or oversight. In addition, in comments to the Corps during the scoping process, Neighbors noted the significant impact of Austin's growth on Bastrop and Lee Counties. It is reasonable to speculate that the omission was made in service to the artificial and unsupportable characterization of a three-county "regional economy" and/or in an effort to avoid the readily apparent need to analyze the potential negative impacts of the "Proposed Action" on the economies of Bastrop and Lee Counties.

The DEIS relies on a flawed application by Jones (2002) of the IMPLAN input-output model for the State of Texas as the "primary tool used to estimate the economic effects of the proposed project" (p. 3.10-12).

76-70 Projections regarding the potential economic benefits of the "Proposed Action" alternative vs. the projected economic losses associated with the "No Action" alternative are based on work by L. Jones (2002), an Alcoa consultant who prepared an analysis of "Economic and Fiscal Impacts of the Three Oaks Mine on the Three Counties Area of Milam, Lee, and Bastrop Counties." In his report, Jones applied an "input-output model," specifically "the IMPLAN modeling system for Texas," which is maintained by the Department of Agricultural Economics at Texas A&M

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76-69 Please see the response to general comment SE-2 in Section 4.5.10 of the Final EIS relative to presentation of aggregated data. Contrary to the inference drawn in the comment, Austin was not addressed in greater depth because it was not found to be relevant to the potential economic effects of the Three Oaks Mine. Under NEPA, the analyses in an EIS are to be focused on potentially significant effects. As noted in Section 3.10.2.1 of the Draft EIS, development of the Three Oaks Mine would, for all practical purposes, simply continue the employment, income generation, and purchasing patterns currently in effect at Sandow, which are concentrated in Milam County. It would have no perceptible effect on growth rates in any of the three counties. Section 3.10.2.2 of the Draft EIS documents the more substantial economic effects of the No Action Alternative. As noted, however, they would affect Milam County to a much greater degree than either Bastrop or Lee County as there are very few workers living in Bastrop and Lee Counties. Lee and Bastrop Counties' data are included and addressed because the proposed Three Oaks Mine would be located in these counties and would affect their tax bases, even though other economic effects on them would be relatively minor.

76-70 Please see the response to general comment SE-2 in Section 4.5.10 of the Final EIS relative to presentation of aggregated data. Also see the response to comment 76-69. Regarding the estimated life of the mine for ad valorem tax purposes, there is an extensive list of assumptions and variables involved in the Jones analysis (Jones 2002, Appendix B), several of which could individually affect the estimate by several percent, positively or negatively. Examples include the annual production rate, the location of equipment in a given year, and the discount rate. In addition, the taxing jurisdictions, themselves, may vary the tax rate over the 25-year life of the mine. Consequently, the tax revenue estimate in the Draft EIS is an approximation, as are other forecasts of effects. The significant consideration is that there would be a substantial amount of ad valorem tax paid to Bastrop and Lee Counties with only minimal project-related demands for services so there would be a substantial net benefit to the public coffers of both counties (see Section 3.10.2.1 of the Draft EIS).

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University (Jones, 2002, p. 30). In applying this model, Jones used a “three-counties area” consisting of Bastrop, Lee, and Milam Counties, which he incorrectly described as the area “that contains the Three Oaks Mine” (p. 30). In fact, the proposed Three Oaks Mine permit area is located entirely within Bastrop and Lee Counties.

Mr. Jones, and subsequently the DEIS, also incorrectly characterized Bastrop, Lee, and Milam Counties as a regional economy. The DEIS states:

Input-output models employ relationships among major economic sectors of a regional economy, such as the Milam, Lee, and Bastrop three-county area, together with imports and exports to and from the region, to characterize the region’s economy and estimate the effects of change in one sector on the rest of the economy (p. 3.10-12).

76-70 There is no evidence whatsoever to support the characterization of Milam, Lee, and Bastrop counties as a “regional economy,” with or without including the Three Oaks Mine in the equation. Rather, there is a great deal of evidence to the contrary (see the previous subsection). Even the minimal information included in the DEIS shows enormous divergence in the economic character of these counties. Moreover, Alcoa’s Rockdale Operations has never had, and does not currently have, any significant impact on the economy of Bastrop County in terms of direct employment, contract services, tax revenues and/or indirect dollars. Establishment of the Three Oaks Mine would not change this picture, as both Alcoa and the DEIS acknowledge that the mine would be a replacement operation relying heavily on existing jobs, contractors, and equipment (p. 3.10-13). Property taxes benefiting the county government would total approximately \$250,000 per year, an amount that could be equaled by fewer than 200 additional households within the county. Relying on Jones’s report, the DEIS reports that “Bastrop County would receive \$7.5 million” over the life of the mine [p. 3.10-14]. However, Jones’s report presumes a 30-year life-of-mine, whereas the DEIS presumes a 25-year life-of-mine, making the \$7.5 million an overestimate by some 20 percent. The one area of potentially significant revenue, school taxes for Elgin and McDade ISDs, would benefit the state rather than the local districts, due to Texas’ school funding structures (p. 3.10-15; Jones, 2002).

Mr. Jones applied the IMPLAN model to describe economic impacts resulting directly from the mine itself, and to describe the broader economic impacts of “not developing the Three Oaks Mine,” i.e., the DEIS’s “No Action” alternative. In the latter analysis, Mr. Jones included economic data regarding Alcoa’s Rockdale smelting complex. Given that Alcoa-Rockdale is an integrated operation, a rationale could be made for this inclusion — although it should be noted that Alcoa could seek to mine Three Oaks lignite even if the Rockdale smelter were to shut down, a scenario that Alcoa itself has posed (see, for example, RRC unsuitability proceedings, 2000-2001) and that has been demonstrated elsewhere in these comments to be a “reasonably foreseeable action.” What is *not* justifiable under any circumstances is the inclusion of Bastrop County in any modeling that addresses the impacts of the smelter’s closure on the regional economy that the smelter helps to sustain. The “regional economy” affected by the smelter might include Milam County and portions of Burleson, Falls, Lee and Williamson Counties — but it would not include Bastrop County.

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The DEIS understates the scope and significance of the diversity of economic activity within Bastrop and Lee Counties, and fails to address the inherent weaknesses in a monolithic economy such as Alcoa has created in Milam County.

The DEIS vastly underplays the strength of Bastrop and Lee Counties' economies in comparison to that of Milam County. One must examine the data tables, for example, to learn that in spite of Alcoa's massive payroll and other contributions to Milam County's economy, Bastrop County's total industry earnings have outstripped those of Milam County every year since 1994. The most recent data furnished in the DEIS are for 1997 — a year in which Bastrop County's total industry earnings were 20 percent greater than Milam County's — which means that the economic impacts of Bastrop County's latest growth surge are not even reflected in the DEIS. The DEIS understatedly describes Bastrop County as having a "fairly diverse economy" (p. 3.10-6). Both Bastrop and Lee Counties have far more diversified economies than does Milam County. This is particularly true in Bastrop County, whose economic health is grounded in (1) retail trade, construction, and services supporting the residential spillover from Austin, (2) several significant government facilities, (3) a range of light industry, and (4) a growing tourist trade. Though much smaller than Bastrop County's overall, Lee County's economy also reflects a diversified base, with the percentage of earnings distributed more evenly across industry categories than in either Bastrop or Milam Counties.

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Milam County, in contrast, presents a classic profile of a rural economy that has become dependent on a single industry. As Table 3.10-9 shows, more than 40 percent of Milam County's industry earnings come from manufacturing and mining (read: Alcoa). This circumstance virtually guarantees a "boom-bust" cycle for the local economy (Audirac, 1997; Miller, 1993). Milam County faces two critical long-term disadvantages. First is Alcoa's (and thus the county's) reliance on lignite, a finite resource that *will* be depleted if strip mining continues to be permitted:

Mining is by definition a boom-and-bust activity; minerals are nonrenewable resources, and all mining areas are temporary; every mineral deposit will ultimately be exhausted, and every mining area is destined to be worked out and abandoned. (Castle, 1995, p. 69)

The second critical disadvantage is the county's dependence on an industry that is controlled by a multinational corporation rather than being locally owned. Two of the country's leading rural economists (Flora and Flora, 1990) have observed that:

...whether or not a firm is locally owned has an impact on corporate decision making. While a locally owned firm may act somewhat paternalistically toward its employees, that paternalism means involvement and investment in the community, and employment and investment decisions based on a long-term profit perspective, rather than short-term profit maximization. (p. 202)

Economic development experts have stressed that rural communities "need to move toward greater local autonomy and long-term viability" (Flora et al., 1993, p. 1). However, it is a regrettable fact that most single-industry dependent communities fail to take steps toward economic diversification until *after* disaster strikes. Rather, as Milam County appears to be doing, many

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Please see the response to general comment SE-2 in Section 4.5.10 of the Final EIS relative to presentation of aggregated data. Also see the response to comment 74-10 regarding effects on economic diversity and boom-bust effects. Adverse effects on the diversity of the Bastrop and Lee Counties' economies from the Three Oaks Mine are not expected to occur.

The potential effects of the Proposed Action are detailed in the same manner as for the No Action Alternative. As it happens, most effects are expected to be positive or neutral, although where negative effects were identified, such as on the tax revenues of Milam County, they are documented (Section 3.10.2.1 of the Draft EIS). Please see the responses to general comments T-2, LU-2, and SE-3 in Sections 4.5.7, 4.5.9, and 4.5.10 of the Final EIS relative to effects on property values from development of the Three Oaks Mine, the effects on the Elgin Main Street NRHD from development of the Three Oaks Mine, and the effects on land use in the immediate vicinity of the Three Oaks Mine permit area. Please also see the response to comment 74-10. While the concerns noted are acknowledged, the evidence indicates that the proposed Three Oaks Mine would not adversely affect economic development efforts by Bastrop and Lee Counties beyond the immediate vicinity of the mine, and the duration of such close proximity effects generally would be short-term in nature except where mining would return repetitively over several years (see response to comment 59-16). In further support of this conclusion, the economic development activity seen in Elgin "within the past year" occurred within the time period that the Three Oaks Mine proposal was public knowledge, but was apparently not deterred by the knowledge or the controversy engendered.

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communities maintain “a passive role or a reactionary stance of denial” (Flora and Flora, 1990, p. 198). As noted elsewhere in these comments, there are numerous warning signs to suggest that — no matter what the fate of the proposed Three Oaks Mine — Alcoa’s aluminum smelter, which generates far more local revenue than the mining operations, already may be earmarked for shutdown.

Bastrop and Lee Counties have done and continue to do the critical work necessary for rural communities to thrive over the long term. Bastrop County in particular has active local economic development corporations (which were not consulted in the preparation of the DEIS), as well as other county, municipal, and civic supports for long-term economic growth. These counties should not be punished for Milam County’s nearsightedness.

The DEIS fails to include any assessment of the potential negative economic impacts of the “Proposed Action,” particularly on Bastrop County — an omission that cannot be justified based on NEPA’s description of “reasonably foreseeable future actions.”

The DEIS includes detailed — though inaccurate — projections regarding the potential negative impacts of the “No Action” alternative. However, it makes *no* estimates or characterizations as to the negative impacts of the “Proposed Action,” in spite of both evidence and massive civic and community concerns, particularly in Bastrop County. Not only do Alcoa’s massive lignite strip mining and water pumping plans go against the economic grain in Bastrop and Lee Counties, they actively threaten other economic development. This threat has been recognized by city and county governments, by local economic development corporations, and by a great number of local businesses (including the major banks in Bastrop County), all of which have made their opposition known via resolutions, public comment, and/or testimony in regulatory proceedings. Specific threats include significant decreases in the counties’ ability to (1) continue attracting Austin commuters and their associated retail and service industries, (2) attract retirees and their associated retail and service industries, (3) draw light industry, particularly companies that support the Austin economy, and (4) support tourism and recreation, especially in Bastrop County.

The research literature regarding rural economic development shows a marked trend among successful rural economies away from extractive industries and toward attracting entrepreneurs, retirees, tourists, and commuters who seek the amenities of rural life. The literature also emphasizes the importance of the natural environment *as an economic resource* in supporting this trend:

If rural communities are to survive, they will need to appear as valued places to live... With the decline in extractive industries, the quality of the environment may be one of the last marketable resources available in many rural communities. (Miller, 1993, p. 92, 100)

Increasingly, rural areas are valued not as a source of natural resources for production, but for their aesthetic worth. Thus, preservation of the aesthetic quality of rural areas continues to be an important economic dimension as well. (Green, in Audirac, 1997, p. 175)

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The pattern of the 1980s suggests... the rural places that benefit will be mainly those with scenic... assets [that] lure the nation's retirees and adaptable entrepreneurs... The evidence suggests that many successful rural communities will shift increasingly from a dependence on natural resource industries toward an industry base — most likely focused on services — that exploits remoteness and scenic amenities. (Drabenstott & Smith, in Castle, 1995, pp. 189-190)

In Texas, as in many other states, tourism is bigger business for rural than for urban areas: "Contrary to most beliefs, rural Texas receives a larger proportion of leisure travelers than the state as a whole. Rural Texas travel attracted 71 percent of leisure travelers." (Texas Economic Development office, cited in *Elgin Courier*, 6/12/02)

Both tourist-related enterprises and rural residential development geared toward commuters, entrepreneurs, and retirees are threatened by Alcoa's proposed plans. The proposed strip mine would mar the landscape and produce noise, vibrations, dust, and lights affecting views of the night sky. Wastewater discharge plans threaten the beauty and stability of local waterways and their surrounding landscapes, including the Colorado River. Alcoa's proposed water pumping would damage a much broader area, with acknowledged effects on springs, seeps, wetlands, and streams and potentially devastating effects on area vegetation and wildlife.

As noted earlier, Bastrop County's economic growth — and, to a lesser extent, that of Lee County — is strongly linked to Austin's economy, with a significant and growing sector of Austin commuters. In addition to tax revenues, these commuters generate new residential construction and retail and service enterprises. Within the past year, for example, Elgin has seen the development of a new H.E.B. grocery store, Holiday Inn Express motel, Blockbuster video store, and several automotive-related businesses. The H.E.B. store alone helped to boost the city's (and state's) sales tax revenues by more than 30 percent (*Bastrop Advertiser*, 2/7/02). This type of development is jeopardized by Alcoa's proposed plans; the effects are already being felt. Bankers, real estate agents, economic development specialists, and county planning groups in Bastrop County all have noted growing concerns for the area surrounding the proposed strip mine. These concerns include:

- potential residents' expressed reluctance and refusal to purchase property in areas near the proposed mine site;
- declines in land and home sales in areas near the proposed mine site;
- declining property values in areas near the proposed mine site; and
- banks' reluctance or refusal to lend money for land purchase or residential construction in areas near the proposed mine site

(For documentation of these issues, see RRC unsuitability proceedings, 2000-2001; see also public comment regarding Alcoa's proposed TCEQ wastewater discharge permit, August 2002. Review of county tax rolls and real estate ads in area newspapers also provide substantiating information.)

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76-71 Tourism is also a significant industry in Bastrop County, accounting for nearly \$40 million in revenues and more than 700 jobs in the year 2000 (*Bastrop Advertiser*, 11/10/01). In that same year, local tax dollars from tourism almost doubled those projected from Alcoa's proposed strip mine (*Elgin Courier*, 6/12/02). Tourism is by no means limited to the southern portion of the county, where Bastrop and Buescher State Parks are located. In its economic development activities, the City of Elgin has made tourism a priority. Elgin is one of 46 National Main Street Cities in Texas, recognized by the Texas Historical Commission and the National Trust for Historic Preservation (*Bastrop Advertiser*, 12/15/01). The Main Street program is a downtown revitalization program; qualifying communities must address requirements for economic restructuring that promote historic preservation, with tourism generally an important economic component.

Elgin is also a part of Texas' Presidential Corridor, the Brazos Trail, and the newly created Texas BBQ Trail. A primary objective of Texas Trails programs such as these is "to encourage travelers to take the country roads" (*Elgin Courier*, 6/12/02). Both the Presidential Corridor and the Brazos Trail pass within a mile of Alcoa's proposed strip mine site. Mining activity would be located barely five miles from Elgin's historic district, and both mine-related and other commuter traffic from Alcoa's proposed road reroutes potentially would disrupt the downtown atmosphere and hasten the degradation of Elgin's historic buildings. (See Cultural Resources section for more information.)

14. Errors and omissions in analyzing "Transportation" issues (Summary, Sections 3.11, 3.17.11)

Overview. The DEIS's analysis of transportation impacts of the proposed Three Oaks Mine is rife with significant omissions, erroneous information and faulty conclusions. As with much of the DEIS, these deficiencies are due in large part to the Corps' and its consultant's almost total reliance on Alcoa for information. These deficiencies might have been avoided if the Corps and its consultant had bothered to gather information on transportation impacts from members of Neighbors and others who actually live in the area proposed for strip-mining.

The DEIS fails to address the negative impacts of Alcoa's proposed road changes on Bastrop County Road 90 and its environs.

76-72 A glaring example of significant omissions is revealed in a look at the DEIS analysis of impacts of the proposed strip-mine on the area's county and state roads. The draft provides data on the number of vehicles that travel most of the county roads near the proposed strip mine. However, it fails to provide any data on the number of daily vehicle trips on CR 90 (also known as Old Lexington Road). CR 90 is by far the most heavily traveled county road near the proposed strip-mine and will definitely be the most heavily impacted. Why was there no data on number of trips on CR 90 reported in the DEIS? Was the traffic on CR 90 measured by Alcoa as it was on the area's other county roads? If not, then why not? If traffic was measured, why were no results reported in the DEIS?

A close look at the situation on CR 90 and the likely impact of the proposed strip mine belies the DEIS's conclusion that the proposed Three Oaks Mine would have minimal transportation

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76-72 Please see the responses to general comments T-1 and T-2 in Section 4.5.7 of the Final EIS regarding the effects of relocation of County Road 90 and the effects on the Elgin Main Street NRHD from development of the Three Oaks Mine, respectively. The assertion that mine workers from Rockdale would use CR 90 on the way to the Three Oaks Mine is questionable, as the route via U.S. 77 and FM 696 through Lexington would be 10 miles shorter and would avoid the hazards of CR90, a "narrow, winding county road."

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impacts. Alcoa's proposed road changes would make CR 90 the most direct route between FM 696 and Elgin (and Austin), vastly increasing the traffic load on the county road. CR 90 is inadequately designed for the heavy traffic it would be carrying, endangering residents along it and causing increased costs of maintenance, upgrading, and/or liability for Bastrop County. CR 90 already is used often by drivers traveling FM 696 as a short cut into Elgin and into Austin (and vice versa). Under Alcoa's proposals, FM 696 would be moved about a mile to the west. This change would result in even more drivers taking CR 90 as a shortcut. Compounding the problem would be the likelihood that many of the 260 mine workers also would be using CR 90 as a shortcut as they drove from Rockdale to Taylor and then to Elgin to reach the mine site.

76-72

Although most of CR 90 recently was blacktopped, it remains a narrow, winding country road. The road is so narrow that in one spot it actually runs between the front yard of a family's house and their garage. In another spot, there is a one-lane bridge. An unsafe situation already exists on CR 90. People drive too fast and often run off the road into ditches, over mailboxes, and through fences. It should be noted that the land around CR 90 is heavily populated all the way into Elgin. The DEIS should have noted the likely impacts on CR 90 — on those who use the road to travel to and from their homes and jobs, and on entities that provide necessary services, including fire and ambulance, school buses, and postal carriers. The DEIS should have addressed the costs Bastrop County and its taxpayers would suffer as a result.

The DEIS erroneously assumes that Alcoa already has, or will obtain, all necessary approvals to make its proposed road changes.

The DEIS takes at face value Alcoa's claims that it is going to eventually get approval from the Bastrop County Commissioners Court and the Texas Department of Transportation (TxDOT) to make the changes it wants to FM 696 and FM 619 and to several county roads. The DEIS fails to analyze impacts of the proposed mine if these approvals are *not* granted. If the drafters of the DEIS had done their homework, they would have discovered that there is a likelihood that Bastrop County is not going to approve the road changes and that TxDOT is on record as saying it will not approve the changes to FM 696 and 619 if Bastrop County does not adopt a resolution supporting those changes.

76-73

The DEIS fails to acknowledge that the mining permit granted to Alcoa by the Railroad Commission on Sept. 20, 2002, was altered dramatically — practically at the last minute — to accommodate the fact that Alcoa has failed to obtain approval from Bastrop County and TxDOT to make the proposed roads changes it needs to implement its initial mining plan. The DEIS also fails to note that neither Bastrop County nor TxDOT has granted Alcoa approval to move its draglines across some county and state roads, approval Alcoa would need to implement portions of its "alternative mine plan" approved by the RRC. The DEIS also fails to note that officials with TxDOT have expressed concerns that some of the roads changes being proposed by Alcoa are not in the overall public interest. For example, Danny Smith, regional engineer in TxDOT's Bastrop office, expressed concerns to his superiors in Austin over Alcoa's proposal to make changes only to FM 619 ("Phase I") and possibly later to FM 696 ("Phase II"), if the necessary approvals are obtained from Bastrop County: "I believe we should keep Phases I & II as a combined agreement only, for the following reasons. First, Phase I is at best a detriment to the State if stand alone. It adds length (i.e.

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76-73 Please refer to the response to general comment Alternatives-3 in Section 4.5.2 of the Final EIS regarding Introduction of the Alternative Mine Plan into the Final EIS.

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76-73 additional maintenance to our system), a questionable alignment corner at the intersection of 619 and Lee CR 303, and does nothing to improve 696" (email message, 7/16/02).

The DEIS makes erroneous assumptions regarding the safety implications of Alcoa's proposed road changes.

76-74 The draft EIS fails to address the potential impacts of transporting lignite from the proposed Three Oaks Mine over public roads. While Alcoa officials now claim they have no plans to ship lignite over public roads, that option appears to be preserved in the company's RRC permit application. Presumably, Three Oaks lignite that is sold or provided to third parties, such as the Elgin brickyards or San Antonio's City Public Service (which has an option to take lignite from the proposed mine), might be shipped over public roads. Such a practice surely would pose additional safety threats to area residents traveling on area roads, especially given the hazard of hauling an unstable, volatile substance such as lignite.

76-75 The DEIS fails to note that the 5.5 mile portion of FM 696 Alcoa proposes to relocate and "improve" is the straightest and, according to accident statistics, safest portion of the 22-mile road that runs from Hwy. 290 to Lexington. Statistics from the Texas Department of Public Safety show that only 9 percent of all reported accidents — and none of the fatalities — occurring in those 22 miles of FM 696 took place in the portion Alcoa wants to change. Roads experts have informed Neighbors that, when only a portion of a road is improved, accidents tend to increase at the points where improvements begin and end. The DEIS also fails to note that there are no plans by TxDOT or anyone else to improve the rest of FM 696 other than the portion Alcoa's plans to relocate these roads.

76-76 The DEIS fails address the public safety impacts of having many, if not most, of Alcoa's 260 mine employees commuting daily down FM 696 from Lexington to the proposed strip-mine site, with most of that travel being on unimproved portions of FM 696. The increase in industrial and commercial truck traffic on area roads as a result of mining activity also would increase safety problems, as could Alcoa's proposed use of flaggers to direct traffic at times on public roads. How can the DEIS conclude that impacts on transportation would be minimal when statistics cited in the draft show almost a doubling in traffic in peak times on FM 696, partly as a result of mine workers driving to and from their jobs and other related mine traffic?

76-77 Finally, the DEIS fails to adequately address the impacts of increased driving distance between some residents' homes and major thoroughfares such as FM 696. Increased safety risks are likely to arise from the additional time required for emergency vehicles to reach homes or accident sites; studies have shown that minutes can make a life-or-death difference in dealing with heart attack, trauma, and fire. Risks also could arise from additional travel time, which means longer exposure to accident risk. Road changes would reduce some residents' options for evacuating themselves and/or livestock in cases of fire, flood or other disasters.

The DEIS contains other significant errors and omissions related to transportation issues.

76-78 The DEIS fails to mention that there has been no substantial Traffic Impact Analysis conducted by Alcoa, Bastrop County, TxDOT or any other entity regarding the impacts of Alcoa's

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76-74 Transport of lignite on public roads is not included in the Proposed Act ion. Please see EIS Section 2.5.1.6.

76-75 The same concern expressed in this comment arose in discussions related to the TxDOT EA for Categorical Exclusion for the Relocation of FM 696 and FM 619, Bastrop and Lee Counties, Texas. The response is on page 85 of that document and is as follows.

"To address the impacts of upgrading only a portion of an existing facility, Alcoa researched the accident records of an upgraded portion of SH21 in Caldwell County, completed in November 1997 by TxDOT. Records were obtained from the Texas Department of Public Safety for this section of SH21 between US183 and the Bastrop County line for the period from 1/1/91 through 7/2000. A study of 5 1/3 years, 2 2/3 years prior to and after construction, (Appendix, Section 1.2) indicates that accidents were reduced by about 44 percent, from 25 to 14 incidents. No anticipated increase in accidents as a result of this project are expected."

76-76 The Draft EIS addressed both traffic increases and traffic safety issues in Sections 3.11.2 and 3.11.2.1, respectively. As a point of clarification, flaggers would be used only in rare instances when it would be necessary to move heavy equipment across a public road.

76-77 The Draft EIS addressed both increases and decreases in travel times in Section 3.11.2.1.

76-78 A traffic impact analysis was conducted as part of the Draft EIS and was documented in Section 3.11. Achieving a C Level of Service would satisfy the design standards of virtually every public highway jurisdiction in the United States. Consequently, the categorization as a minor reduction is believed to be reasonable. Detailed evaluation of lost time (beyond the travel times analysis in the Draft EIS), gasoline use, and vehicle wear are beyond the scope of the EIS. There is no evidence to suggest the road changes would have any effect on local businesses.

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76-78 proposed road changes. Sound engineering practices dictate that such a Traffic Impact Analysis should be conducted before making any conclusions regarding such impacts. The DEIS concludes that the Level of Service (LOS) on FM 696 will be downgraded from the current B to a C, but categorizes this as only a “minor reduction.” Such a reduction clearly is not “minor”; rather, this is another example of the ways in which language in the DEIS is skewed to portray Alcoa’s plans in the most favorable light. The DEIS also fails to adequately consider the increased costs to area residents due to (1) lost time; (2) added gasoline; and (3) added wear and tear to vehicles as a result of road changes. It should have considered the possible loss of business for some small business owners, due to greater inconvenience to clients/customers in reaching the business, and decreased aesthetic appeal of business location. Furthermore, it should have assessed the potential loss in property values due to increased traffic, noise pollution and closer proximity to heavily-traveled roads.

76-79 The DEIS fails to examine whether county governments would be able to afford to maintain widened, paved roads and whether there would be resulting tax increases for residents. The DEIS fails to consider that Alcoa is proposing to build portions of the proposed new FM 696 on land that is to be reclaimed after being strip-mined. The DEIS should have examined the impacts on a highway of being built on such land and the likelihood that future subsidence of reclaimed land would result in a highway that buckles or is otherwise affected, making it unsafe and/or requiring expenditures by state and local governments to repair.

76-80 The DEIS fails to adequately examine the impact of construction and use of the proposed haul road on the quality of life and health of nearby residents. Particular attention should have been paid to health and quality-of-life effects due to noise, air and light pollution. Finally, the DEIS fails to take into consideration the broad opposition by area residents, especially those living in Bastrop County, to Alcoa’s proposed road changes.

15. Errors and omissions in analyzing “Noise and Visual Resources” (Summary, Sections 3.12, 3.17.12)

Overview. The DEIS pays inadequate attention to both noise and visual impacts from Alcoa’s proposed plans, and relies excessively on the work of Alcoa’s hired consultants for its conclusions.

The DEIS understates the negative impacts of noise pollution on residents in the Three Oaks region.

76-81 As is true in many other sections, the DEIS depends on the work of Alcoa consultants for its understated conclusions regarding noise impacts related to the “Proposed Action.” Yet Alcoa’s noise impact studies for the proposed Three Oaks strip mine have a problematic history. The first study, conducted for Alcoa by Zephyr Environmental, predicted noise impacts without taking a single sound measurement in the area being evaluated. The study concluded that Alcoa’s new strip mine should be no more of a nuisance to neighboring residents than a barking dog and that as long as area residents kept their windows closed, they should be able to sleep at night. It was pointed out to Alcoa in a subsequent regulatory proceeding that two 13 million pound draglines, 80 pieces of heavy equipment, and a relocated highway constitute quite a barking dog (see RRC unsuitability proceedings, 2000-2001).

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76-79 Maintenance costs would be expected to be lower on newly constructed and improved roads than on old and deteriorated roads. It is assumed that all construction of public roads would have to meet the standards of the relevant jurisdiction and that new roads would not be accepted for public maintenance if they did not meet appropriate sub-base compaction standards. Expert witness testimony at the RRC hearing indicated that there should be no problem constructing roads on reclaimed land that has been in place for a few months and compacted to specified engineering criteria (Buchanan 2000).

76-80 Air quality and noise effects of the proposed haul road are addressed in Sections 3.8.2.1 and 3.12.2.1, respectively, of the Draft EIS. The haul road would not be lighted except by haul truck headlights. Opposition is acknowledged and the opportunity to comment on the EIS gives ample opportunity to express concerns (see Chapter 4.0 of the Final EIS); however, the purpose of the EIS is to provide an objective analysis of the potential effects of the proposed project.

76-81 Please see the response to general comment NEPA-1 in Section 4.5.1 of the Final EIS regarding the use of data provided by Alcoa’s consultants. In the case of noise, USACE analysis of the data for the Draft EIS resulted in several refinements and changes to conclusions about the effects of noise from the Three Oaks Mine. Please see Section 3.12.2.1 of the Draft EIS, especially the summary paragraph, which does not conclude that noise impacts would be minimal as this comment asserts. Finally, while there would be residents adversely impacted by Three Oaks Mine noise, there are no sensitive receptor locations that would be affected by high noise levels “... 24 hours a day, 7 days a week, 52 weeks a year, year after year.” The mobile nature of the mining activity, as addressed in the Draft EIS, would result in shorter-term noise impacts even in locations where the high-noise equipment would return periodically for several years.

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76-81

According to Alcoa's more recent research, approximately 125 residences are located within 1,000 feet of the proposed mine. These residences would be subjected to noise disturbances for many years, some exceeding maximum standards set by the U.S. Department of Housing and Urban Development. Alcoa's own data show that anything within 7,000 feet of the dragline operation would result in disturbing increases in night time noise levels. The EPA has determined that an increase in noise of 10 decibels is enough to cause community residents to take vigorous action to oppose a noise source. Some residents near the proposed strip mine can expect to experience an increase of over 20 decibels in noise levels. For example, the DEIS cites a noise complaint from a resident living three miles away from Alcoa's current Sandow mine. Hundreds of people live within three miles of the proposed Three Oaks Mine. These residents would be negatively impacted by the noise produced by the proposed mining operation — noise that would continue 24 hours a day, 7 days a week, 52 weeks a year, year after year. Despite all the evidence to the contrary, the DEIS concludes that negative noise impacts associated with this project will be "minimal."

The DEIS is negligent in its treatment of light pollution impacts.

76-82

The DEIS includes only one paragraph regarding light pollution and its effects on human health. This is a gross oversight in determining the impacts of light pollution that the DEIS admits would occur during nighttime operations of the dragline and other mine related equipment. There are many retired and elderly individuals who live in the area who would be impacted the most by Alcoa's light pollution. Light pollution can cause loss of sleep in both quantity and quality, and disturbed sleep patterns, which may lead to high blood pressure, renal problems, and heart disease. In addition to the human impacts of light pollution, wildlife would also suffer the negative impacts of light pollution from Alcoa's mining operations. Light pollution can alter migration patterns for birds and other wildlife, a particular concern since migratory species in the Three Oaks region include whooping cranes, bald eagles, and several species of concern. Light pollution can also cause deciduous trees, such as Post Oaks and other trees common to the area, to drop their leaves later than normal due to a disruption in the normal day/night cycle.

16. Errors and omissions in addressing "Hazardous Materials" issues (Summary, Sections 3.13, 3.17.13)

The DEIS is in error in failing to address significant issues related to Alcoa's practices in disposing of lignite coal combustion wastes at its strip mine sites.

76-83

In its surface mining and reclamation permit application for the Three Oaks Mine site, ALCOA proposes to continue to re-use and dispose of enormous volumes of certain coal combustion wastes generated at its steam electric generating plants and smelter facilities in Rockdale, Texas as mine fill and road base with no liner or monitoring requirements. Although the draft EIS only mentions these reuse and disposal practices in passing, the DEIS indicates that more than 875,000 tons/year of fly ash and/or bottom ash are being "recycled" at Alcoa's lignite mining sites. Although the Corps is aware of these practices, it completely ignores them in its discussion of hazardous materials in the DEIS. Certainly, these wastes in these volumes should present significantly more concern to the Corps and to the public than Alcoa's management of used oil and diesel fuel, issues that are addressed in those sections of the DEIS dealing with hazardous materials.

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76-82

Alcoa has committed to minimize lighting to the degree possible commensurate with worker safety. Lighting would be shielded and oriented downward to reduce glare from operating lights, including lighting on draglines and lignite loading shovels.

Area lighting is required for safety and operating the system in three areas of the loadout facility: 1) the two truck dump areas, 2) the two storage piles and their respective radial stackers, and 3) the reclaim transfer point to the overland conveyor.

Two types of metal halide lamps and fixtures will be used: 1) with lens that provide a directional pattern around the operating areas of the transfer point and as stanchion fixtures on the radial stackers, and 2) with reflectors and lamps that provide down lighting over the truck dump and storage piles. The directional fixtures could be adjusted to give a pattern only as far out from their mounting point as is required. The down lighting fixtures could be elevated to a height that would light outward in a pattern and only far enough to cover the storage piles. It is estimated that these fixtures would be mounted on poles approximately 100 feet above grade next to the storage piles.

Minimum illumination levels for each area would be as recommended by the Illuminating Engineering Society of North America and meet MSHA criteria. Metal halide lighting would be located at each bridge and at the conveyor booster drive. These lights would also be shielded.

Except for the early part of the mine life, draglines generally operate below the ground level and the surrounding spill piles, and highwalls would effectively minimize light pollution from leaving the mine area. Lignite loading shovels always operate well below the surface elevation and would minimally contribute to off-site light pollution.

76-83

Please see the responses to general comments PA-1 and PA-2 in Section 4.5.3 of the Final EIS.

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The DEIS addresses the issue of "recycling" Alcoa's coal combustion ash as follows:

Approximately 875,000 tons of ash are produced per year, comprising 350,000 tons of bottom ash and 525,000 tons of fly ash. Since 1998, approximately 30 percent of the fly ash and 100 percent of the bottom ash has been recycled; a portion of the bottom ash is currently used for road surfacing and ramp construction at the Sandow Mine. Fly and bottom ash to be recycled is transported offsite by dump truck. All non-recycled fly ash is transported by dump truck to a Texas Natural Resource Conservation Commission (TNRCC)-approved landfill adjacent to the generating station and the Sandow Mine. (p. 1-6)

Alcoa proposes to use bottom ash from the existing Rockdale power generating facility as a road surfacing material in pit and ramp areas of the proposed mine. Bottom ash used on temporary roads would be removed from the roadway during concurrent and final reclamation and placed as backfill in the mine pit, as currently approved at the Sandow Mine." (p. 3.2-29)

Prior to use of bottom ash at the proposed mine site, Alcoa would obtain TNRCC and RRC approval, as appropriate. Bottom ash is currently approved by the TNRCC for use as road surfacing on haul roads and it is approved by the RRC for use as backfill at Alcoa's existing Sandow Mine. (p. 2-39)

... [I]ncorporation of bottom ash into the backfill material is not anticipated to degrade groundwater and thus is not expected to pose a health risk." (p. 3.1401)

76-83

These passages suggest that practices at Sandow would carry over to Three Oaks Mine. If so, substantial quantities of bottom ash (hundreds of thousands of tons *per year*) would be placed directly into unlined pits at Three Oaks Mine or placed there after removal from temporary roadways and ramps. Before such practices are allowed, the USACE or another federal or state agency should require Alcoa, under supervision, to perform thorough, independent laboratory analyses of bottom ash from each of its power generating stations as well as from the Sandow steam electric generating station operated by Texas Utilities to determine whether any hazardous constituents are present in this coal combustion waste and, if so, at what levels.

The only analytical data that Neighbors has been able to obtain from the EPA and TCEQ (formerly the TNRCC) are one sample from Sandow Unit No. 4 collected in 1986 using an outdated test methodology, one sample collected from Sandow Unit No. 4 collected in 1992 using the TCLP test methodology (which is the only appropriate test methodology for characterizing whether a material is hazardous) and several 1992-1994 analyses using the 7-day leachate test, also collected from Sandow Unit No. 4. Not only is this data not representative of all of the wastes that are currently being shipped out to the Sandow mine site in that they only reflect test results for one of the power generating units, the data is clearly insufficient to characterize the nature of these wastes over time. We find it not only careless but horrifying that these enormous volumes of waste have been shipped to unlined and unmonitored pits for many years without better characterization by some federal or state agency, and we have asked both the EPA and TCEQ to investigate this open

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dumping of potentially hazardous materials in units that do not even meet the standards applicable to garbage dumps.

Although these types of wastes have been exempted from federal hazardous waste regulation, this exemption is not based on technical data that shows that these materials do not contain elevated levels of heavy metals and other hazardous waste constituents. Instead, this exemption, which is commonly referred to as the "Bevill Amendment" exemption, was sought by industry and granted by the EPA based on the economic infeasibility of managing the large volumes of these wastes that are generated in units that meet RCRA, hazardous waste standards. Simply put, this industry generates so much of this material that it allegedly cannot afford to manage it in units that contain liners, leachate collection systems and other engineering controls. The only other industry in this country that has been allowed to continue dumping its wastes into unlined pits, landfills and impoundments is the oil and gas exploration and production industry. Fortunately, it does not generate either the volume or toxicity of waste that are generated by the combustion of fossil fuels.

76-83 The management of coal combustion waste is not exempt from the RCRA, Subtitle D solid waste management program. There is an exclusion for mining overburden at 40 CFR §257.1(c) that provides as follows: "[T]hese criteria apply to all solid waste disposal facilities and practices with the following exceptions...; (2) the criteria do not apply to *overburden* resulting from mining operations intended for return to the mine site" but this exemption pertains only to mining overburden at lignite mining sites; not to coal combustion wastes generated at a mining company's smelter and power generating facilities. How have Alcoa and Texas Utilities been allowed to ship *hundreds of thousands of tons per year* of coal combustion wastes to the Sandow mine site for placement in unlined and unmonitored pits that do not even meet RCRA, Subtitle D solid waste management standards? The answer is simple: by arguing that these wastes are being legitimately re-used or "recycled" at the mine site as road base or "minefill," uses that are exempt from both the RCRA Subtitle C and Subtitle D programs. These arguments are specious and completely unjustified on technical grounds. Dumping untreated, industrial wastes onto the ground is not legitimate and beneficial recycling; it is disposal. No end product is being produced which can be sold or otherwise transferred to the general public. This is not an in-house, closed loop recycling process used to minimize the generation of waste at the smelter and power generation facilities. It is open dumping – a practice that was outlawed for virtually every other industry in this country in 1980.

Even Alcoa's own employees recognize that these action constitute disposal when they argue the semantics of this issue in certain email correspondence referenced in the DEIS:

At this point, there is not a landfill proposed for the 3 Oaks Mine Permit Area. If a landfill is required, Alcoa will pursue it in accordance with TNRCC regulations. . .Material that is allowed to be re-used for beneficial use or recycled by TNRCC will be recycled, which may include placing the materials in the pit to bring the land back to approximate original contours. This typically includes materials that meet the definition of a Class 3 type waste . . .The bottom ash is not *disposed of* in the mine pits. Bottom as [sic] is *recycled* into the mine pits as a *beneficial re-use* to bring the land back to its approximate original contours. Any characterizations of bottom ash *disposal activities* in the mine pits are wrong. (emphasis added) [See DEIS listed

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under "Hodges 2002," e-mail exchanges among Randy Waclawczyk (Alcoa), Berney Williams (Weir-IMC at Alcoa) and Russ Moore (ENSR)].

Neighbors would further note that the little analytical information that is available is not sufficient to justify a Class III waste designation. Typically, the TCEQ regulates bottom ash and fly ash as Class II industrial solid waste. The letter authorizations that were provided by the TNRCC to authorize this activity were contingent upon the waste materials meeting a Class III waste classification; however, the paucity of analytical information furnished by Alcoa does not justify a Class III waste classification. In addition, no analytical information of any type has been furnished to any regulatory agency by Texas Utilities, which is not even registered as a generator of waste with the TCEQ or EPA. Moreover, the authorizations were contingent on these materials being managed in a manner that does not contaminate surface water or groundwater supplies. Since there is no monitoring, however, it is not possible to determine whether or not these activities have resulted in contamination. For this reason, Neighbors has urged the EPA and TCEQ to investigate these practices. Finally, Neighbors would note that the letter authorizations that were issued to Alcoa were signed by a former TNRCC executive director, Dan Pearson, in the mid-1990s. By early 1999, Mr. Pearson was employed by Alcoa as a consultant on the Three Oaks mine project, exactly the sort of revolving door practice by former agency executives that leads groups like Neighbors to distrust the TCEQ's regulatory determinations. We can only speculate as to the *quid pro quo* for the TCEQ's authorizations, upon which the RRC relied in allowing this activity in the first place.

Not only did the enormous volumes of waste being shipped out to ALCOA's mines alert us to this problem, recent EPA regulatory determinations on coal combustion wastes dated May, 2000 and March, 1999 found that:

- 1) *No data* is available on the organic constituents such as dioxins and furans that may be present in coal combustion wastes generated by non-utility facilities such as Alcoa;
- 2) *No data* is available on the quantities of non-utility, CCW wastes being reused as mine fill and road base at mine sites;
- 3) Further study is needed on the risks associated with disposing of CCW at mine sites since such activities can result in the leaching of hazardous constituents into groundwater and surface water supplies;
- 4) Further study is needed of the risks posed by elevated levels of arsenic in these wastes (levels which exceeded the EPA's screening criteria); and
- 5) Further study is needed on the risks posed by excessive levels of mercury, dioxins and radionuclides that may be present in CCW wastes generated by the burning of lignite, the dirtiest and lowest form of coal.

Moreover, the EPA discusses the fact that primary drinking water standards for arsenic and selenium have been violated in downgradient monitoring wells at a lignite mining facility in North Dakota, the only other state that burns significant quantities of lignite. The damage cases reported by the EPA are important since the TCEQ has recently published papers addressing the bioaccumulation of

76-83

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mercury and selenium in certain East Texas lakes located in proximity to other lignite mining sites as well as potential problems with selenium levels in fish tissues in East Texas.

76-83

Neighbors believes that the EIS must properly address the burial of coal combustion waste in unlined mine pits at the Three Oaks site since this practice is intended for the Three Oaks mine site. Acknowledging that hazardous waste standards do not apply to this activity due to the Bevill Amendment exemption in RCRA, Subtitle C, Neighbors would still remind the USACE that this disposal practice is regulated under RCRA, Subtitle D and, at a minimum, the standards that apply to the management of municipal garbage should be satisfied (e.g.; liners, a leachate collection system, groundwater monitoring and storm water runoff controls). To ensure that these practices do not degrade surface or groundwater resources, not only does long term (many decades) surface water and groundwater monitoring need to be required as a condition of the TPDES wastewater discharge permit or another TCEQ letter authorization, the TPDES permit should also require that the pits be constructed with some form of liner and leachate collection system and that storm water controls be installed around each unit to prevent washout. However, the TPDES permit has not yet been issued; therefore, the Corps cannot assume that such protective measures will be required or implemented. Failing to address this issue as part of the EIS, in Neighbors' considered opinion, would be arbitrary, capricious and an abuse of discretion.

17. Errors and omissions in addressing "Public Health" issues (Summary, Sections 3.14, 3.17.14)

Overview. The DEIS contains major deficiencies in its analysis of the public health effects of the proposed Three Oaks Mine project. Major public health concerns related to both air and water pollution are ignored or dismissed. Elevated levels of criteria air pollutants, like those emitted from coal burning plants, have been clearly linked to acute respiratory disease, chronic respiratory disease, cardiovascular disease, reduced immuno-competence, and elevated mortality rates. Elevated levels of the heavy metals, radionuclides and toxic, organic compounds like those found in coal combustion waste are known to cause a number of health damaging conditions, including cancer, birth defects, neurological disorders, and developmental disorders. The studies supporting these claims are numerous and grounded in solid science. In scoping comments, Neighbors requested that the USACE conduct local health surveillance to assess the past effects of Alcoa's projects and to assess the risks of this new one. Such investigation was not conducted; however, it remains a necessary step to protect the public interest.

The DEIS fails to address the substantial and well documented health effects resulting from air pollution of the types and quantities emitted by Alcoa's Central Texas operations.

76-84

The DEIS devotes less than two pages to consideration of health effects from Alcoa's air pollution. The Corps has limited its consideration to fugitive dust produced during mining and to related vehicle and equipment emissions (p. 3.8-1). While those are important factors, the larger issue related to this project is the air pollution produced by the continued use of lignite as the fuel source at four power generating stations in Milam County. Though the DEIS states that the existing Rockdale power generating facility and smelter are considered interrelated projects for the consideration of potential cumulative impacts with the proposed mine (p. 3.14-3), it insists on keeping them as separate sources in its application of legislated air pollution regulations on all

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76-84

Please refer to the response to general comment NEPA-2 in Section 4.5.1 of the Final EIS regarding potential cumulative impacts from the existing facilities at Rockdale, including the Alcoa and TXU power generating facilities and Alcoa's aluminum smelter. Also see the responses to general comments AQ-1 and AQ-2 in Section 4.5.6 of the Final EIS relative to cumulative impacts and proposed reductions in emissions from the power plants.

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pollutants except particulate matter, 10 microns and below (pp. 3.8-5 through 3.8-11). The DEIS considers only PM₁₀ standards, because those are the predominant air pollutants that would be produced by the act of strip mining alone. Instead, it should acknowledge that the criteria air pollutants and unregulated air toxics produced by lignite combustion would not be produced in the absence of its extraction from the ground and its use as a fuel source. The mining of lignite in the proposed Three Oaks Mine would allow Alcoa to continue its legacy of air pollution and harm to human health.

The DEIS, in its brief mention of the four power stations and their contribution to the cumulative effects of this project (pp. 3.8-20 through 3.8-21), discusses a Rockdale program for SO₂ monitoring, newly installed electrostatic precipitators, and pending NO_x reduction permits, but does not include data of actual monitoring of criteria air pollutants. If such monitoring data exists, surely it is relevant to this DEIS, and if it does not, then it is crucial that such data be collected before a project with this potential for harm to human health is approved.

76-84 Criteria air pollutants are not the only airborne threats to human health that this project poses. Other hazardous air pollutants, or HAPS, are present in the lignite that will be extracted and burned from the Three Oaks Mine. The DEIS specifically mentions antimony, arsenic, beryllium, cadmium, chromium, lead, manganese, mercury, nickel, selenium, and uranium as components of local lignite (p. 3.14-2). In the Utility Air Toxics Report to Congress, the EPA reported on HAPs and prioritized 14 of them as having greater potential for public health concern. All are potential combustion products from power plants that burn fossil fuels. These are arsenic, beryllium, cadmium, chromium, lead, manganese, mercury, nickel, hydrogen chloride, hydrogen fluoride, acrolein, dioxins, formaldehyde, and radionuclides. CDC's Agency for Toxic Substances and Disease Registry includes arsenic, cadmium, chromium, lead, and mercury in their list of the top twenty most hazardous substances.

The DEIS states that the concentrations of these trace elements in local lignite are comparable to those in soil, and though it mentions the possibility that burning the lignite may make those elements more available in the environment, it proceeds to limit its consideration of how they would effect human health to exposure in fugitive dust (p. 3.14-2). Lignite combustion greatly concentrates the amounts of these toxic substances in air emissions. Studies have demonstrated that surface deposition of trace elements on coal fly ash results in increasing concentration with decreasing particle size. In other words, the finest particles, most likely to be breathed deeply into the lungs, have the highest concentrations of biologically active trace elements. Elements showing this kind of concentration trend include arsenic, cadmium, chromium, lead, nickel, selenium, and all radionuclides. Volatile organic compounds also adsorb onto fly ash surfaces, which may actually help to stabilize them against photochemical decomposition ("Biomedically Relevant Chemical and Physical Properties of Coal Combustion Product," by Gerald Fisher. Environmental Health Perspectives, vol. 47, pp. 189-199, 1983).

Mercury is released from the coal combustion process as elemental vapor and is even more widely dispersed through the environment than fly ash. Mercury threatens human health not only by direct inhalation, but by ingestion in contaminated water or food subsequent to bioconcentration. Fish consumption dominates the pathway for human exposure to mercury. According to the TDH Bureau of Food and Drug Safety, currently twelve bodies of water in Texas have fish consumption

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advisories or bans because of mercury contamination. The fish from Lake Somerville, which receives effluent from the Rockdale facility, has never been tested for mercury content. Surely, this testing is relevant to the EIS and should be conducted before any decision is made regarding approval of the Three Oaks Mine project. Non-inhalation exposures may be even more risky than inhalation exposures for toxics that are persistent and bio-accumulative. Six of the prioritized HAPs identified by the EPA (arsenic, cadmium, dioxins, lead, mercury, and radionuclides) have the potential for non-inhalation exposure through soil and water contaminated by their deposition from the air.

The EPA is currently developing HAP emission standards based on the current body of science regarding their effects on human health. As the DEIS mentions, these rules are scheduled to be released for public comment in 2003 (p. 3.14-3). With that deadline approaching so soon, it seems likely that the EPA could provide USACE some guidance in evaluating the risks posed by these air toxics now. Monitoring data on these substances should be collected and assessed before this project is approved. The DEIS also states that the technologies necessary to abate HAP emissions have not yet been identified (p. 3.14-3). That may be true for the entire range of toxics, but it is easy to find a number of abatement technologies for mercury emission control on the USDOE website. Abatement technologies for other metals are likely available as well.

76-84 An analysis by Abt Associates, a consulting firm used by the EPA to assess many of the agency's air regulatory programs, estimated that 30,100 deaths in the U.S. may be attributed to the emissions of fossil fueled power plants (predominantly, coal-burning plants) each year. In addition, they estimate that these emissions caused 20,100 hospitalizations for respiratory and cardiovascular causes, more than 7,000 asthma related emergency room visits, 18,600 cases of chronic bronchitis, 600,000 asthma attacks, over 5 million lost work days, and over 26 million minor restricted activity days. Abt Associates' modeling of the health impacts of power plant pollution for the state of Texas estimates 1,310 deaths, 885 hospitalizations, and 31,700 asthma attacks per year (Clean Air Task Force, 2000). In Texas, 1,509,580 children live within 30 miles of a coal-powered plant and 92,386 of those children have asthma. Texas ranks seventh in the country for pediatric asthma. *There are 35,555 children who live within 30 miles of the Sandow plant; 2,369 of those children have asthma* — a higher proportion than that for all Texas children living in such proximity to coal powered plants (Natural Resources Defense Council).

Human quality of life issues aside, the economic impacts of air pollution implied by these numbers is staggering. The national financial burden of asthma alone, including both direct medical costs and indirect costs such as lost work time, was estimated at \$14.5 billion for the year 2000 by CDC's National Center for Environmental Health (NCEH website). The Allergy and Asthma Foundation of America estimates the total expenditures for asthma in Texas to be \$763 million yearly, \$435 million of that in direct medical costs (Texas Asthma Plan). The CDC's Healthy People 2000 report estimates that the health costs of human exposure to outdoor air pollutants range from \$40 to \$50 billion each year in the United States (NCEH website). These costs include the health effects of air toxics as well as the criteria pollutants. Using estimates from a National Academy of Sciences study, 360,000 children in America, or 1 in 200, suffer from developmental or neurological defects caused by exposure to known toxic substances like those produced from coal combustion. This number is likely under-estimated (Natural Resources Defense Council). Financial costs of just 18 of these disabilities total \$240 million per year nationally (Polluting Our Future).

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Mercury is one of the best examples of how dangerous these coal combustion toxins are to human health. CDC's National Health and Nutrition Examination Survey determined that 6 million women of child-bearing age had levels of mercury in their tissue above what the EPA considers safe. That means approximately 390,000 newborns were at risk of neurological effects from in utero exposure (Natural Resources Defense Council). Coal burning power plants are the single largest source of mercury pollution. Based on modeling data, EPA estimates that 15% of mercury stack emissions deposit within 30 miles of the coal burning plant. EPA also estimates that the average power plant emits about 50% of the mercury in the coal burned through its stack, the remaining mercury is released in pre-combustion coal cleaning, or in post-combustion waste (Mercury Falling). In 1998, 171 pounds of mercury was released into the air at Sandow. As noted earlier, 35,555 children live within 30 miles of the Sandow facilities (Natural Resources Defense Council).

The DEIS fails to address the potential health impacts resulting from water pollution related to Alcoa's operations.

76-85

The DEIS devotes even less attention to health effects from water pollution than from air pollution and concerns itself primarily with the use of fertilizers and pesticides in reclamation activities. Again, while this issue is not insignificant, it is not the most substantial concern that should be addressed by the EIS. Less subtle than the air deposition of toxics, are the direct land and water releases of coal combustion wastes, the solid waste left over from combustion and captured in air pollution control devices. Alcoa plans to use the proposed Three Oaks mine site to dispose of its coal combustion waste from the Rockdale plant on road surfaces and in unlined pits, where it can potentially contaminate surface and ground water. This continues the environmentally irresponsible disposal of fly ash as road base and bottom ash as minefill practiced at the Sandow mine. The DEIS completely disregards the human health risks associated with the improper disposal of coal combustion wastes. It dismisses legitimate concerns about this danger by asserting that the EPA had not "identified a case where placement of coal wastes can be determined to have actually caused increased damage to groundwater" (p. 3.14-1). From this, they conclude that the planned use of bottom ash as minefill material at Three Oaks is not expected to degrade groundwater quality or pose a health risk.

But in the summary and response document to the "Report to Congress: Wastes from the Combustion of Fossil Fuels," the EPA also states:

We have determined that the establishment of national regulations is warranted for coal combustion wastes when they are placed in surface or underground mines because: (a) we find that these wastes when minefilled have the potential to present a danger to human health and the environment, (b) minefilling of these wastes has been an expanding practice and there are few states that currently operate comprehensive programs that specifically address the unique circumstances of minefilling, making it more likely that any damage to human health or the environment would go unnoticed or unaddressed... Although we have identified no damage cases involving minefilling, we are also aware of situations where coal combustion wastes are being placed in direct contact with ground water in both surface and

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Please see the responses to general comments PA-1, PA-2, and SW-1 in Sections 4.5.3 and 4.5.5 of the Final EIS, respectively, relative to bottom ash and surface water monitoring. It should be noted that Alcoa does not propose to dispose of coal combustion wastes by minefilling under the Proposed Action (see Section 2.5 of the Draft EIS).

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underground mines. We concluded in our recent study of cement kiln dust management practices that placement of cement kiln dust in direct contact with ground water led to a substantially greater release of hazardous metals than we predicted would occur when the waste was placed above the water table. For this reason, we find that there is a potential for increased releases of hazardous metals as a result of placing coal combustion wastes in direct contact with groundwater. Also, there are damage cases associated with coal combustion wastes in landfills. The Agency believes it is reasonable to be concerned when similar quantities of coal combustion wastes are placed in mines, which often are not engineered disposal units and in some cases involve direct placement of wastes into direct contact with ground water. We are concerned that government oversight is necessary to ensure that minefilling is done appropriately to protect human health and the environment.

76-85

If the USACE is serious about addressing the public health impacts of this proposed mine project, it must revisit the unresolved issue of coal combustion waste contamination of surface and ground water, not just dismiss the controversy by saying that these materials are not classified as hazardous waste. The fact that these materials have been exempted from hazardous waste regulation through an exemption sought by the mining industry based upon the large volumes that are generated does not mean that these wastes do not contain hazardous levels of heavy metals or other, chemical constituents. In fact and as noted above, the EPA has determined that these wastes can and do contain risky levels of mercury, arsenic and other heavy metals as well as dioxins, furans and radioactive material. Moreover, these regulatory conclusions are based upon admittedly inadequate and insufficient data from an industry that has repeatedly and vociferously fought each and every attempt to characterize these wastes and to regulate them. Since this practice of minefilling has been used at the current Sandow mine and is proposed for use at the Three Oaks mine for enormous volumes of waste for which little, if any, analytical information has been provided to any federal or state regulatory agency, the USACE should direct its contractor to conduct independent sampling and testing of the bottom ash used for backfill both at the smelter facilities at which this waste is generated as well as at the Sandow mine site. Surface and ground water should also be independently tested. Relying on Alcoa's reported values from such testing is simply not enough.