















CES would like the general Public to know that the County Commission and NMED had this information available to them and still allowed the development of Por Su Gracias, knowing that the [Downs Contamination site](#) was far greater than what was being addressed -

REVIEW BY ZANE SPIEGEL, July 19, 2001

LIMITED ENVIRONMENTAL ASSESSMENT REPORT on POR SU GRACIA

Subdivision, Lot 8
prepared by
Horizon Environmental Southwest, Inc., May 7, 1996

SUMMARY OF, AND COMMENTS ON, THE REPORT'S STATEMENTS

1. Lot 8, owned by Vista Del Mundo, Inc., is approximately 2 1/2 acres of undeveloped land, of which less than about 1/2 acre (p.2, par. 3) is ³...part of a closed permitted landfill previously used for the disposal of stable waste (i.e. horse manure, straw, etc.) from The Downs at Santa Fe...² (p.1, par. 1).

Comments: (A) The terms of the permit, presumably by NMED, need to be examined; (B) on p. 2, par. 4 (Sec 1.2), the stable wastes are alleged to contain ³...perhaps one or more horse carcasses.² As stable wastes do not normally include horse carcasses, and might not have been legally interred with the normal manure and straw, County or State regulations on this point at the time of permitting should be investigated. The likelihood of

test hole identification of the presence of one or two horse carcasses in the landfill is rather

small--sources of this information would need to be documented by appropriate legal investigation.

2. From p. 1, par. 1 (end): ³ The purpose of the environmental study was to evaluate the subsurface conditions at Lot 8 and discover as accurately as possible, **with the resources available**, [emphasis added] if other wastes besides stable wastes were disposed at this landfill.² The meaning of the emphasized phrase is unclear--did it mean (A) the client's limitation on time and cost of the study, or (B) limitation of the consultant's staff and equipment for investigation?

Comment: see subsequent evaluation of adequacy of this study.

3. From p. 2, par. 3, ³... closed landfill...reportedly extends to the east beyond the boundary of Lot 8.² Comments: From section A-A¹ on Fig. 4, and logs of test holes S-B-1 and SB-2 (Appendix B), the depth of the landfill at the east boundary of Lot 8 is the maximum value (20 feet, of which 18 feet is manure) determined in the study; the field observations (p. 7 and 8) on the atmospheric smoke and odor reportedly coming from the portion of the landfill that is farther east, and general public knowledge that

these

phenomena have been very variable in time and space, pose the problem that the apparent absence of VOC in testhole samples, or of smoke and odor emanating from Lot 8 itself, might not be typical of conditions on Lot 8 at all times (see comments below on report's conclusions, p. 8-9).

[From independent observations reported by neighbors and other observers of the landfill site, that smoke and flames emitted from the landfill comes from different locations and in varying amounts at different times, the statement (Sec. 3.3, end) ³...results [VOC] (Volatile Organic Compounds) of this on-site well screening were not of significant magnitude above anticipated background levels² was unduly optimistic, and the brief study made, in view of the public knowledge and repeated complaints by neighboring residents over a long period of time, was absolutely not adequate to determine that the the landfill does not present a ³substantial health hazard².]

4. Rep. 3, Sec. 1.4: Repeated samplings, not only of gases in the soils of Lot 8 itself, but of the air drifting in various directions from the adjoining portions of the landfill, and the ground water moving under and down-gradient of the landfill, should have been undertaken, over a period of at least one full year, or at least recommended in Sec. 4, with a reiteration (from p. 3, sec. 1.4) that ³Activities such as detailed soil and geologic analyses, groundwater (sic) monitoring, aquifer analysis, etc. [and especially drifted smoke and odor from the east, both subsurface and in the atmosphere], which are normally associated with later stage environmental assessments, were not conducted.²

5.. Rep. 6, Sec. 2.3, the ³site walk² and other observations noted in the remainder of the report should have resulted in conclusions other than those made in Sec. 4.0.

6. Re end of p.6 and top of p. 7, and Table 1: ³the results of this on-site soil screening were not of significant magnitude above anticipated background levels. [presumably of VOC gases ?]²:

Re VOC determinations shown in Table 1, following Figure 3, all the VOC values, as represented by the column of ³P.I.D. (Photo Ionization Detector). Reading², are ³0.0², so the statement quoted above is rather strange. Were the ³background levels² selected also ³0.0² ? A note on Table 1 (re: the fifth column values) should have been added, if true, that for each test hole, P.I. D. readings were made on each sample collected from the test hole, as stated in the text (end of p. 6), and that the second column refers only to the depths of samples taken for ammonia analyses. Putting the second column next to the sixth column would have helped to have clarified this point.

Re: ammonia values in Table 1 and text statements on p. 8, par. 3: It might have been useful to have also determined total nitrogen from each test hole.

7. Re the statements on page 8, at the end of the first paragraph, beginning with ³...it appeared...²
the appearance might have been substantiated by reference to the study's results

illustrated on Fig. 4, Section A-A¹, plus the data from test hole SB-1, near the east property line of Lot 8 and The Downs.

8. Re: **³SUMMARY AND CONCLUSIONS** (p. 8-10):

(A) The report's conclusion (page 9, par. 3, end) ³...the landfill does not present an adverse environment impact or substantial health hazard.² is not warranted on the basis of the two-day study, considering certain facts noted in the report, identified above, and other facts that were, or should have been, known to NMED and HORIZON. The identified volume of horse manure buried in Lot 8, the presumed evidence in test holes of burned manure and solid waste mixed (probably burned in situ after burial), and continuing underground burning in similar landfill to the east should have been sufficient evidence to believe that future burning could occur on Lot 8 as well, which would indicate that simply covering the site with a simple thin layer of ³...cover consisting of native soil...² (p. 9, par. 4, line 2) would not be adequate to prevent the infiltration of rainfall, a major contribution to the propensity of buried manure and solid waste to be leached and also heat itself sufficiently to burn, at least in wet periods, which are more common in Santa Fe summers than in most of Arizona.

(B) The ammonia concentration of 6.7 MG/KG in test hole SB-1 (Table 1) is not a ³low² concentration (p. 9, par 3, line 4).

(C) The report should have recommended additional studies (see our item 4 above), plus field observation and atmospheric sampling over a long time period, and study of the extension of the thick horse waste and solid waste landfill of Lot 8 into Santa Fe Downs property to the east, since conditions there obviously have the probability of adverse effects on the use of Lot 8, by observed drift of smoke and odor in the atmosphere, and possible underground migration of gases to the west though the landfill. Additional evidence supporting our conclusions is that the ³trash² noted in the boring nearest the east boundary (in test hole SB-8) could indicate the possibility that there is more trash, solid waste, and possibly non-horse organic wastes, adjoining and east of Lot 8.

(D) To the credit of Horizon, strong recommendations were made at the end of page 9, but to the discredit of Santa Fe County and NMED, these have been disregarded: ³No building should occur on the landfill surface or within 50 feet of the landfill perimeter. Any of the surface domestic trash should be removed and legally disposed. These wastes should not be incorporated within the landfill. Upon completion of the cover the area should be adequately signed and controlled to mitigate future digging into the site.²

Alternative options listed were ³removal of the stable wastes to suitable landfill, and/or the mixing of the stable wastes with soil as a conditioner or fertilizer.² If the landfill were to be found to have substantial quantities of non-stable waste, the latter of these two alternatives would not be feasible. In view of our findings of fact, it appears that the alternative of removal of wastes to an appropriate landfill should have been the only alternative recommended and followed.

(9) REVIEWER'S RECOMMENDATIONS:

The legality and wisdom of the original ³permitting² of the landfill on Lot 8 of Por Su Gracias and all subsequent actions by NMED and Santa Fe County should be carefully reviewed, taking into account the apparent limitations and inadequacies of the Horizon study, and failure of the County and NMED agencies to follow those recommendations which are deemed herein to have been appropriate, with the objectives of (1) eliminating any hazards to public health, and (2) providing a basis for seeking compensation to any members of the public that already have been harmed by negligence and/or failure to use common sense and follow standard engineering practices that were current during the life of the landfill.

Zane Spiegel, Hydrologist