MEMORANDUM

PA CONFIDENTIAL #4

TO: Cornelius Amindyas, RCRA Permitting Program

FROM: Ron Kern, RCRA Technical Compliance Program

DATE: June 17, 1994

SUBJECT: **RESPONSES/COMMENTS TO THE JUNE 6, 1994 S.M. STOLLER FAX ON THE PROPOSED GANDY LANDFILL PROJECT, CHAVES COUNTY**

[NOTE: These responses/comments are preliminary based upon currently available information or knowledge--i.e. they represent our best "guess-timates" currently].

Question 1: In anticipation of Question 3, if there is to be an exemption or waiver from groundwater monitoring, HRMB would be very interested in a monitoring system within the immediately underlying and adjacent vadose zone, capable of detecting lateral or vertical migration of any hazardous constituents from the landfill. From a conservative standpoint, HRMB would use the double liner and leachate collection and removal regulatory requirements [40 CFR 264.301(c)] as the "point of departure" when evaluating any request for an exemption.

Question 2: This question is more of a Permitting Program concern.

a) Even if HRMB approves of an exemption from the double liner and leachate collection and removal requirement, an alternate design will probably be required [§264.301(d)]. Therefore, an "Action Leakage Rate" [§264.302] would probably have to be addressed and stipulated in the Part B Permit. [NOTE: Action Leakage Rate = max. design flow rate that the leak detection system can remove without the fluid head on the bottom liner exceeding 1 foot; §264.302(a)].

b) Because a liner system will probably be required [§264.301(d)], an approved "response action plan" must be addressed [§264.304].

c) A "Construction Quality Assurance Plan" [§264.19] is appropriate because a liner system, conforming to the requirements of §§264.301(c) or (d) for landfills, will probably be required.

Question 3: As HRMB understands from previous information, the facility will not receive bulk or non-containerized liquids for disposal. An exemption to groundwater monitoring may be possible (and must be proposed with detailed explanation by the facility), in general, if the facility does not plan to dispose of liquid waste (which could possibly be a significant component of recharge to groundwater).

Question 4: No response required.

Question 5: Regarding the regulatory requirement [§270.14(b)(11)(iii)] for identification of the 100-year floodplain, HRMB would require information such as the referenced letter (from "flood plain administrator for Chaves County"), plus additional documentation, such as an area-specific topographic map showing any surface water or drainage features, possibly aerial and surface photos, and any archival/historical data relating to rainfall and/or flooding events.

Question 6: Modeling will be needed to support the regulatory evaluation of the technical validity of the Part B permit application. Since the facility is already considering the use of modeling (see Question 12), this question has already been answered. The objective of modeling, in keeping with currently available EPA guidance, should probably be to determine the time of travel (TOT) for a contaminant in fluid to migrate a certain distance (e.g. $TOT_{100)}$ either laterally or vertically.

Question 7: HRMB cannot currently provide specific advice on the question of how to model a contaminant release. A conservative approach, however, is recommended. An example might be a continuous leak from the leachate collection system (constant head) in which the only barrier to fluid and contaminant migration is any geological liner (e.g. compacted clay liner) and the subsurface soils.

Question 8: It is HRMB's understanding, based upon EPA guidance, that a typical period of interest for the modeling simulation is 100 years.

Question 9: The facility should adopt a conservative approach. The facility should provide information, as part of the model selection process, to enable HRMB to determine if wastes might migrate vertically or laterally from the landfill in the fluid and/or vapor phase(s). With respect to modeling of individual contaminants in waste mixtures, HRMB again recommends the conservative approach: modeling using the hazardous constituent(s) which may be most mobile in the unsaturated zone.

Question 10: HRMB understands the necessity of concurrence upon an adequate geological model prior to determination of an appropriate contaminant transport model. The geological model, therefore, should be based upon site-specific geological (and possibly geotechnical) data. HRMB Technical Compliance Program agrees that a geological model may have to be evaluated and accepted prior to contaminant transport model selection and implementation (phased approach).

Question 11: HRMB does not currently have examples of acceptable modeling studies related to hazardous waste disposal facilities.

Question 12: HRMB does not currently have a preference. The facility will have to provide the rationale for proposing a particular model. HRMB will adhere to EPA guidance, however, which suggests the following criteria for model selection:

a) Facility should be familiar with operation of appropriate code.
b) Data required by code must be available.
c) Code should be applicable to specific problem.
d) Code should be acceptable and documentable.

If facility is considering the use of the SUTRA or VS2DT codes, facility must ensure that the above criteria are taken into account and that HRMB becomes familiarized with the code.

Question 13: 40 CFR 270.10(j) is addressing the "risk" aspect related to a possible release from the landfill. Technical Compliance does not have any guidance, per se, but does not believe this requires an extensive risk characterization. The citation appears to be reasonably self explanatory.

Question 14: HRMB would like to review and comment upon any and all soil boring/coring programs planned. In addition to drill hole density, this review would also be conducted upon types of sampling and logging for geological characterization, geotechnical samples, and environmental background samples (i.e. an adequate site characterization must be ensured).

Question 15: HRMB may require copies of all data related to the geological/geotechnical site investigation, although summary tables may be appropriate in some cases. Additionally, prior to conducting the downhole geophysical surveys, HRMB would like the opportunity to review the types and purposes of the proposed downhole logging.

Question 16: HRMB would like the opportunity to review the proposed types of geotechnical analyses to determine their applicability. HRMB understands that in-situ analyses are generally preferable to laboratory analyses, but that certain analyses (e.g. grain size analysis) can only be conducted in the laboratory.

Question 17: HRMB does not currently require splits of any drill cuttings or cores collected at the facility. These materials, however, should be available (i.e. archived) for examination at the facility. Color photographic documentation of cutting and cores (correlated with geophysical and geological logs) would be appropriate.