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CERTIFIED MAIL
RETURN RECEIPT REQUESTED

August 8, 1995

Mr. Larry Gandy
Vice President,
Triassic Park Disposal Facility
1109 East Broadway
Tatum, New Mexico 88267

RE: Notice of Deficiency (NOD): Technical Adequacy, Gandy
Marley, Inc., Triassic Park Hazardous Waste Disposal
Facility
EPA ID No. NM0001002484

Dear Mr. Gandy:

The Hazardous and Radioactive Materials Bureau (HRMB) of the New Mexico Environment Department (NMED) has reviewed for technical adequacy, the Gandy Marley, Inc.'s November 1994 permit application for the Triassic Park Hazardous Waste Disposal Facility as required under the New Mexico Hazardous Waste Management Regulations.

After reviewing the permit application, the NMED has found the application to be technically deficient. The enclosed attachment lists the required information necessary for NMED to declare the application technically adequate and begin preparation of a draft permit.

The information requested in the attachment must be submitted to NMED within thirty (30) days of receipt of this NOD. Failure to submit the required information in this designated time may result in issuance of a Notice of Intent to Deny (NOID) a permit. The HRMB may consider a petition for a deadline extension, provided that a written justification and the expected submittal time are given.

Gandy Marley Inc.
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If you have any questions regarding this matter you may contact
Bob Sweeney or Cornelius Amindyas at (505) 827-4308.

Sincerely,



Benito Garcia, Chief
Hazardous and Radioactive Materials Bureau

cc: Barbara Hoditschek, HRMB
Tracy Hughes, NMED
David Neleigh, EPA Region 6
Ron Kern, HRMB
Bob Sweeney, HRMB
Cornelius Amindyas, HRMB
File Red, 95
File Reading, 95

Technical Comments
Triassic Part Permit Application
August 2, 1995
page 1

ATTACHMENT I

The following technical comments, questions and recommendations from the Technical Compliance Program (TCP) of the Hazardous and Radioactive Materials Bureau (HRMB), New Mexico Environment Department (NMED), relate to the November 1994 document "RCRA Permit Application for the Triassic Park Waste Disposal Facility". This document was prepared by the S.M. Stoller Corporation for Gandy Marley, Inc. (GMI) of Tatum, New Mexico in accordance with the New Mexico Hazardous Waste Management Regulations 20 NMAC 4.1, Subpart IX, 40 CFR 270.10.

Language in bold print enclosed within parentheses is quoted directly from the text of the November 1994 document. TCP's comments follow the quotes.

GENERAL COMMENTS:

Many of the following comments were addressed during HRMB's June 8, 1995 meeting in Santa Fe with Messrs. Gandy and Marley and their consultants Mr. Ken Schultz, TerraMatrix and S.M. Stoller Corp. It is appropriate to include them here since, as discussed during the meeting, a written response to the comments is required. Other issues, including HRMB's request for maps and an aerial photo and the discussion of an Environmental Assessment, were resolved during the meeting and are not included here.

The major concerns TCP has regarding this Permit Application relate to inadequacy of the subsurface characterization, the landfarm design, and the solid waste management units (SWMUs) which are not included in the Permit Application. The omitted SWMUs are:

- 1) the untarping, sampling, and weigh scales area,
- 2) the truck staging area,
- 3) the truck wash facility,
- 4) the maintenance shop,
- 5) the chemical laboratory,
- 6) the stormwater retention basin,
- 7) the future debris encapsulation area, and
- 8) the future waste processing area.

SPECIFIC COMMENTS:

ITEM

1. Table of Contents, page iv. ("**2. Landfill...**") This section should be labelled "Storage, Treatment, and Disposal".
2. Section 1.2, 2nd paragraph. ("**Support facilities and structures, which will not be RCRA permitted...**") As noted in the General Comments above, eight of the facilities and structures are solid waste management units and need to be included in the permit application.
3. Section 1.4, 2nd paragraph. ("**There are no residences near the proposed site.**") State the distance and direction to the closest residences.
4. Section 1.4, 4th paragraph. ("**...Area 1...and Area 2.**") What do these designations mean?
5. Section 1.4, 6th paragraph. ("**The nearest production well is situated three miles from the proposed site.**") Are there abandoned wells, or other types of wells, tests, or borings closer? What is the direction of the wells, etc.? This was discussed at the June 8, 1995 meeting in Santa Fe and the questions may be answered when GMI submits the map which was requested.
6. Section 2.1.2, 2nd paragraph. ("**...samples will be taken and fingerprint testing...conducted.**") How, and by whom, will this testing be done? Will consistency of test results with the generating facility information be determined in all cases? How will the waste be handled if the results are inconsistent?
7. Section 2.1.3, 1st paragraph. ("**...to ensure adequate accumulation time is available...**") The sentence is not clear. Can "space" be substituted for "time"?
8. Section 2.1.5, 3rd paragraph. ("**...a three-dimensional record...**") What horizontal dimensions are proposed for the individual blocks in this system?
9. Section 2.2.2. ("**Roll-off containers will be stored on an open pad...divided into two sections.**") How will incompatible wastes be kept separated?
10. Section 2.2.2. ("**The (roll-off storage) area will not be**

- equipped with (emergency safety equipment)...because of the facility's close proximity to the stabilization facility, which will be equipped..." Figure 2-1 shows the roll-off storage area to be 800 feet from the stabilization facility. This distance will cause an undue delay in obtaining emergency safety equipment at the roll-off storage area.
11. Section 2.2.2.1. ("**...perforated pipe surrounded by drainage material.**") How will all of this be cleaned following any spills? Would it be simpler, and as efficient, to leave out the drainage material?
 12. Section 2.2.2.1. ("**...the secondary containment sump.**") What will be the volume of this sump? Will it be 10% of the volume of the waste containers?
 13. Section 2.2.4. ("**...adequate secondary containment.**") What is meant by this?
 14. Section 2.2.7. ("**All container storage areas will be visually inspected at least weekly...**") All storage areas should be inspected at least daily.
 15. Section 2.3.1, 1st paragraph. ("**Each bermed area will be sloped to provide drainage to a sump.**") What will be the sump capacity?
 16. Section 2.3.1, 1st paragraph. ("**The coating will cover the entire floor, sump, and berm...**") The coating must be compatible with wastes stored in the unit.
 17. Section 2.3.1, 1st paragraph. ("**...up to the minimum berm height.**") What does this mean?
 18. Section 2.3.1, 3rd paragraph. ("**Response to releases will be initiated within 24 hours of detection.**") The response to any release should occur immediately. 20 NMAC 4.1 Subpart V, 40CFR264.56 requires immediate response to releases and immediate notification to the National Response Center. HRMB should be notified at the same time.
 19. Section 2.3.11. ("**If a release occurs...the tank will be removed from service and all materials...removed...within 24 hours...**") Response (e.g. removing the tank from service and removing all contents) to a release must begin as soon as possible. See Item #18 above.
 20. Section 2.4, 2nd paragraph. ("**The backhoe bucket and stabilization bin will be thoroughly cleaned...**") Where will the bucket be cleaned? How will the bins be cleaned?

21. Section 2.4.1, 1st paragraph. ("**...sand between the walls that will serve as a primary...leachate collection and removal system...**") How will releases into the sand be cleaned up? Will the sand be removed from between the tanks and cleaned ex situ? Or will the sand be cleaned in situ?
22. Section 2.4.2. ("**No new waste will be placed in the bins unless...the existing tank system is cleaned or flushed...**") How will this be accomplished?
23. Section 2.4.7. ("**...the thickness of the inner tank and outer shell will be increased to compensate.**") How and why will this be done?
24. Section 2.5.1.1, 1st paragraph. ("**...the facility will accept ...PCB waste, excluding...liquid waste containing PCBs greater than 500 parts per million.**") As stated in 20 NMAC 4.1 Subpart VIII, 40CFR268.42(a)(1), liquid hazardous wastes containing PCBs at concentrations between 50 and 500 parts per million must be incinerated or burned in high efficiency boilers.
25. Section 2.5.1.2, 1st paragraph. ("**The bottom liner will consist of the clay subgrade below the landfill site.**") For at least the eastern part of the landfarm the subgrade is siltstone and/or sandstone, not clay. Because these coarser-grained sediments are of higher permeability than the clay, and because the proximity to groundwater is unknown, the proposed liner design may be insufficient to protect the underlying sediments and groundwater from contamination due to releases of hazardous constituents from the landfarm.
26. Section 2.5.1.2, 3rd paragraph. ("**...the HDPE will be terminated...less than 10 feet up the side slope of the landfill.**") The HDPE must cover the entire side slope. The exposed clay liner, as proposed, will dessicate and allow leakage of liquids to adjacent host rocks. (note: also see Item 68 below.)
27. Section 2.5.1.2, 3rd paragraph. ("**...geotextile materials will be horizontally seamed...**") Horizontal seams will not be permitted within 5 feet of the landfill bottom. Please explain the need for any horizontal seams.
28. Section 2.5.1.2, 4th paragraph. ("**...operational stresses to the liner systems following installation are anticipated to be negligible.**") Please explain the statement. HRMB understands that operational stresses should be greatest during the initial stages of filling.

29. Section 2.5.1.3, 1st paragraph. ("**...well graded drainage material...**") Please define this term.
30. Section 2.5.1.3, 2nd paragraph. ("**The LCRS will be...designed and operated to minimize clogging...**") The previous paragraph states that geotextile filter will be included in the LCRS. Given the geotextile's potential for clogging, how will the design minimize clogging?
31. Section 2.5.1.3, 5th paragraph. ("**The sump system will be provided with a method for measuring and recording...**") Please define the method of measuring and recording, specify the maximum head of leachate possible and the maximum head to be maintained on the liner, and show the sump design, pump design, and disposal design for the quantity of liquid to be removed. Also, calculate or demonstrate the adequacy of the liner, LCRS, and LDS to accommodate a hole (eg. 1mm²/acre) in the liner.
32. Section 2.5.1.4, 1st paragraph. ("**...piping...8 inches in diameter...**") This seems excessive unless major leaks are expected.
33. Section 2.5.1.4, 3rd paragraph. ("**The sumps and liquid removal methods will be of sufficient size to collect and remove liquids...**") Design specifications must be submitted.
34. Section 2.5.1.4, 3rd paragraph. ("**All pumpable liquids in the sump will be removed...**") Non-pumpable liquids need to be removed also.
35. Section 2.5.1.6. ("**...daily cover of sand and dirt...and application of water...**") State the proposed thickness of daily cover and how water will be applied without producing landfill leachate.
36. Section 2.5.1.7. ("**It is not anticipated that gas generation will be of concern.**") How will any gas generated in the landfill be detected and removed if necessary?
37. Section 2.5.1.9, 3rd paragraph. ("**The proposed site is to be developed within impermeable...sediments of the Dockum Group...**") Data provided with the Part B Permit Application indicate the Dockum's heterogeneous sediments to be of varying permeability. The potential for releases from the facility to migrate to groundwater is unresolved.
38. Section 2.5.2.2. ("**...sloped toward the center...**") Please clarify. This is not the way it is shown on Figure 2-7.

39. Section 2.5.3.2. ("**...a routine preventive maintenance program.**") Please define the program.
40. Section 2.5.3.6, 3rd paragraph. ("**'No Smoking' signs will be placed wherever there is a hazard from reactive waste.**") Will landfill operators be allowed to smoke? "No Smoking" signs, in both English and Spanish should be placed throughout the facility.
41. Section 2.5.3.7, 4th paragraph. ("**...unless all free liquid has been in some way been eliminated.**") Please explain how this will be done.
42. Section 2.5.3.7, 5th paragraph. ("**Unless they are very small...**") Please define the term "very small".
43. Section 2.5.3.8, 1st paragraph. ("**...(EPA) believes that an ALR below 100 gpad should not be required.**") The baseline of 100 gpad is for units meeting the minimum technical requirements (cf. 57FR3462, 1992, IV, C, 1.) and does not apply to the Triassic Park landfill.
44. Section 2.5.3.9, 1st paragraph. ("**...ensuring that the ALR is not exceeded in the future...**") How will this be accomplished?
45. Section 2.5.3.9, 2nd paragraph. ("**Removing all pumpable liquids from the sump...**") How will non-pumpable liquids be removed?
46. Section 2.5.3.9, 2nd paragraph. ("**...remove as much liquid as possible.**") Design the system so all liquid can be removed.
47. Section 2.5.3.9, 4th paragraph, 4th bullet. ("**...remove all standing water from the surface of the landfill,**") Describe the method for doing this.
48. Section 2.5.3.9, 4th paragraph, 7th bullet. ("**...repair any damage...**") Describe how this will be done and who will do it.
49. Section 2.5.3.9, 5th paragraph. ("**...the following actions should be implemented...**") Substitute the word "will" for "should".
50. Section 2.5.3.9, 5th paragraph, 1st bullet. ("**Notify NMED within seven days...**") NMED must be notified by telephone as soon as possible, but not more than 24 hours after the leak is detected. A followup written report must be sent within seven (7) days.

51. Section 2.5.3.9, 5th paragraph, 4th bullet. ("**Increase the pump rate...**") This should not be necessary if the system is properly designed.
52. Section 2.5.3.9, 5th paragraph, 14th bullet. ("**Review the analysis of the leachate...to help determine the source of the leaks,**") Please describe how this will work.
53. Section 2.5.3.9, 5th paragraph, 15th bullet. ("**...examine the primary liner 5 feet on either side of damage...**") This is unclear! How will the damage be located?
54. Section 2.5.3.9, 5th paragraph, 16th bullet. ("**Submit a written assessment to NMED within 14 days...**") The information should be submitted with the seven day followup report. (note: also see Item 50 above.)
55. Section 2.6.1.1, 1st paragraph. ("**The compacted clay surface will provide a foundation...**") Please explain how the surface beneath the composite bottom liner (which itself includes the 3 feet of compacted soil material) will be prepared.
56. Section 2.6.1.1, 2nd paragraph. ("**...geographical location of the facility will prevent the migration of any hazardous constituent to adjacent subsurface soil, surface water, or groundwater.**") Please explain the statement. It is not clear how geographical location will prevent any of the above.
57. Section 2.6.1.1, 4th paragraph. ("**...any leachate generated.**") How might leachate be generated in the surface impoundment?
58. Section 2.6.1.1, 6th paragraph. ("**...the geonet drainage system...will effectively eliminate any head from developing...**") What is the potential for geonet clogging?
59. Section 2.6.1.2, 1st paragraph. ("**When leachate accumulates, it will be pumped to a tanker truck.**") How will the "leachate" be handled then?
60. Section 2.6.1.2, 5th paragraph. Add a "t" to ("**...do no_ occur ...**") in the last sentence.
61. Section 2.6.1.3. ("**...waste will not exceed a depth of approximately 8 feet.**") The distance from the sump to the opposite corner is approximately 400 feet. With a bottom slope of 2% (cf. Figure 2-11) the sump will be approximately 8 feet lower than the opposite corner of the unit. If the depth of waste at the sump corner is 8 feet then the opposite corner will be dry.

62. Section 2.6.2.4, 3rd paragraph. ("Any time liquids are detected at a specified level,...") What is the specified level?
63. Section 2.6.3. ("Waste accepted at the surface impoundment will...include...PCB wastes, with the exception of wastes listed in Section 2.5.1.1") See Item 24 above for comment on PCB wastes.
64. Section 2.6.4.3, 2nd paragraph. ("The surface impoundment will be removed from service if the liquid level suddenly drops for an unknown reason.") What amount of drop in the liquid level will cause the shut down?
65. Section 2.6.4.3, 2nd paragraph. ("...leaks will be stopped...") How will leaks be stopped?
66. Section 2.6.4.3, 2nd paragraph. ("As a last resort, the impoundment will be emptied.") To where will impoundment be emptied?
67. Section 2.6.4.8. ("...in Section 2.5.3.8.") This is an incorrect citation. It should reference Section 2.5.3.9.
68. Figure 2-9, Detail B (Slope). The landfill's "side slope" construction as shown is not acceptable. The liner must be extended to the top of the slope. 20 NMAC 4.1 Subpart V, 40CFR264.301(a)(1)(iii) requires liner installation to cover all surrounding earth likely to be in contact with the waste or leachate.
69. Figure 2-9, Details B (Slope), C (Toe of Slope), D (Floor), and E (Pipe Centerline). The landfill design does not meet minimum technology requirements for liners and leachate collection and removal systems specified in 20 NMAC 4.1 Subpart V, 40CFR264.301(c). Alternative designs may be approved if, as stated in 20 NMAC 4.1 Subpart V, 40CFR264.301(d)(1), they "Will prevent the migration of any hazardous constituent into the ground water or surface water at least as effectively as the liners and leachate collection and removal systems specified in paragraph (c) of this section;". The subsurface geology of the proposed landfill site includes siltstones and sandstones which can provide a conduit to groundwater should releases of hazardous constituents occur. NMED is concerned that the proposed alternative design is not adequately protective of human health and the environment and currently requires adherence to the minimum technology requirements.

70. Figure 2-10, Detail J (Typical Cover). Was a HELP model analysis done for evaluation and comparison of alternative landfill designs? If so, please provide a copy of the results. Also, a final cover plan drawing must be submitted.
71. Note #6 on both Figure 2-10 and 2-12. The note refers to "Final Design". To avoid delay in processing the Permit, GMI should submit the final designs as soon as possible.
72. Figure 2-11, Cross-Section C-C'. Will this design prevent fluid head on the bottom liner from exceeding the one-foot maximum permitted by 20 NMAC 4.1 Subpart V, 40CFR264.222(a)?
73. Figure 2-12, Note #5. ("**Drainage layer consists of sand or gravel with min. permeability of 1×10^{-2} cm/sec**") For a surface impoundment, a leak detection system constructed of granular drainage materials, must have a hydraulic conductivity of at least 1×10^{-1} cm/sec. (cf. 20 NMAC 4.1 Subpart V, 40CFR264.221(c)(2)(ii)).
74. Section 3.1, 1st paragraph. The Groundwater Monitoring Guidance Document referred to is not included in the Section 13 References of the Permit Application.
75. Section 3.1, 7th paragraph. ("**This section documents the lack of groundwater present in the proposed Triassic host rocks...**") The information provided in the Permit Application does not confirm adequately the lack of groundwater in the proposed host rocks.
76. Section 3.1, 7th paragraph. ("**This section...presents contaminant transport modeling results that demonstrate the low potential for groundwater contamination.**") GMI should present results that demonstrate no potential for contamination.
77. Section 3.5.3.1, 4th paragraph. ("**...Upper Dockum (475 feet thick)...**") The maximum thickness shown on the cross-sections included with the Permit Application is 140 feet.
78. Section 3.6.1, 2nd paragraph. ("**...tanks on adjacent lands...contain water for livestock...retain water from run-off or receive water from an underground pipeline.**") State the source, and its location, of the water in the pipeline.
79. Section 3.6.2, 4th paragraph. ("**...Roswell weather station...mean annual precipitation is 10.61 inches...**") GMI used this value to calculate the amount of water available for groundwater recharge. As noted in Section

- 3.3.2, the record high annual precipitation is 32.92 inches. This higher value should also be used to calculate the water available for groundwater recharge as a "worst case" scenario in considering the potential for groundwater contamination.
80. Section 3.7.1.2, 4th paragraph. ("**...Upper Dockum... permeable zones...produce small quantities of groundwater.**") Please indicate what the water is produced to (eg. springs, wells) and the location of production.
 81. Section 3.7.1.2, 4th paragraph. ("**...overlying aquifers.**") Please identify the overlying aquifers.
 82. Section 3.7.2. ("**Detailed drilling within this boundary has encountered no groundwater.**") The geophysical log for borehole PB-140 indicated water at a depth of 91 feet.
 83. Section 3.7.2.2, 3rd paragraph. ("**...saturated lithologies were encountered approximately 2,500 feet east (downdip) of the proposed landfill site...**") The maps and logs provided with the Permit Application indicate no drilling east of the proposed site.
 84. Section 3.7.2.2, 4th paragraph. ("**...west of the proposed facility boundary...near the outcrop of the Upper Dockum...**") Please indicate on a map the location of the Upper Dockum outcrop west of the proposed facility.
 85. Section 3.7.2.2, 6th paragraph. ("**...nine other drill holes...were also cased.**") A list of the nine, along with the perforated intervals, should be included here.
 86. Section 3.7.2.2, 6th paragraph. ("**There was no water observed in these holes...**") PB-140 was one of the holes cased. Water was not identified in this hole when it was drilled on July 17, 1994; however, water was recorded on the geophysical log, run on the same day the hole was drilled, at a depth of 91 feet. If no water was observed in this hole during subsequent monitoring GMI needs to address this and propose an explanation for its disappearance.
 87. Section 3.7.2.4, 2nd paragraph. ("**Perched groundwater located approximately 2,500 feet downgradient of the site is the uppermost aquifer that could be affected...**") Assuming downgradient is to the east, there currently is no subsurface control 2,500 feet downgradient of the site.
 88. Section 3.7.2.4, 2nd paragraph. ("**The Lower Dockum unit would act as a barrier limiting the vertical migration of**

- contaminants...") The statement may be correct; however, the top of the Lower Dockum unit has not been identified in the eastern part of the proposed facility.
89. Section 3.7.2.4, 3rd paragraph, 1st bullet. ("**...an extremely conservative estimate of travel time to the uppermost aquifer.**") Why is estimated travel time to the uppermost aquifer considered "extremely conservative"? It is reasonable to assume contaminant releases will travel through the siltstones/sandstones, rather than through the mudstones, to groundwater. Using core-derived hydraulic conductivity values in the calculations should give reasonable travel times.
90. Section 3.7.2.4, 6th paragraph. ("**...elevation difference ...of...4555-4025...**") Please explain where these elevations came from.
91. Section 3.8.1, 1st paragraph. ("**The Upper Dockum is not saturated within the facility boundaries.**") This statement is questionable. The geophysical logging indicated water in borehole PB-140 and the Upper Dockum was only partially evaluated in the eastern part of the proposed facility boundaries.
92. Section 3.8.1, 3rd paragraph. ("**There is no regional aquifer developed within the Upper Dockum; however, locally permeable zones may produce small quantities of groundwater.**") What is this statement based on?
93. Section 3.8.2.1, 2nd paragraph. ("**...the optimal placement for monitoring wells is...**") Placement of monitoring wells will be determined after the subsurface geology and hydrogeology are characterized sufficiently. (note: The installation of ground water monitoring wells should be consistent with the RCRA Ground-Water Monitoring Technical Enforcement Guidance Document, September 1986; RCRA Ground-Water Monitoring: Draft Technical Guidance, November 1992; and Waste Management Area and Supplemental Well Guidance, June 1993. Monitoring well specifics (eg. siting, depth, screened interval, etc.) are subject to NMED approval. "As built" diagrams for all monitoring wells must be submitted to NMED.)
94. Section 3.8.2.2, 4th paragraph. ("**Wells will be constructed with a 5-foot...screen extending upward from the Upper Dockum/Lower Dockum contact.**") Groundwater will need to be monitored at the top of the aquifer also. Placement of the screen interval must await characterization of the uppermost aquifer. (cf. EPA's RCRA Ground-Water Monitoring: Draft Technical Guidance, EPA/530-R-93-001, November 1992.)

95. Section 3.8.2.3, 5th paragraph. ("**...will be thoroughly decontaminated...**") The method of decontamination needs to be included. For details see EPA's RCRA Ground-Water Monitoring: Draft Technical Guidance, EPA/530-R-93-001, November 1992.
96. Section 3.8.2.3, 9th paragraph. ("**The record will contain the following...**") The chain-of-custody should also include the preservatives used and a remarks section for communicating other pertinent information (e.g. potential hazards) to the laboratory.
97. Section 3.9, 4th paragraph. ("**...Upper Dockum...sediments, consisting of fluvial, interbedded mudstones and siltstones, are unsaturated beneath the proposed site.**") This may be determined through additional borings into the Lower Dockum sediments.
98. Section 3.9, 5th paragraph. ("**...Upper Dockum...becomes partially saturated 2,500 - 3,000 feet east of the site...**") This remains to be determined since there is no subsurface control within 3,000 feet to the east of the proposed site.
99. Section 3.9, 8th paragraph. ("**The base of the proposed landfill is designed to rest upon the sediments of the Lower Dockum unit.**") Review of the geophysical logs of borings indicates:
a) there may be Upper Dockum siltstones/sandstones where the proposed landfill's base will be located, and
b) there are Upper Dockum siltstones/sandstones where the east slope of the landfill will be constructed.
100. Figure 3-9. Three other "Areas of Investigation" are shown. Please include any information they may have provided on the Upper Dockum, Lower Dockum, and/or groundwater.
101. Figure 3-10. Cross section line A-A' is shown crossing the north part of sections 16, 17, and 18. This cross section was not included with the Permit Application.
102. Figure 3-13. The cross section shows groundwater east of the proposed facility. What prevents this water from migrating to the west?
103. Figure 3-13 and Appendices C, D, & G. Please correct the following borehole information discrepancies.
- PB-1: The location is Section 18 on the geophysical log and Section 8 on the lithology log and Figure 3-13.
- PB-26: No section location given on the geophysical log.

The lithology log location is NWNW of Section 9 but the borehole is shown in NWNE of Section 9 on Figure 3-13. Also, the "depth driller" on the geophysical log is 180 feet while the lithology log indicates drilling continued to 200 feet.

PB-27: No section location given on the geophysical log. The lithology log location is NWNE of Section 9 but the borehole is shown in NWNW of Section 9 on Figure 3-13. The elevation on the lithology log, 4144 feet, matches neither location (according to the topographic map).

Plate 3-1: The neutron log for PB-27 is shown west of that for PB-26, but they are labeled in the reverse order. Water is shown at a depth of approximately 145 feet in PB-27 but neither the lithology log nor the geophysical log indicate water.

PB-34: Location is Section 18 on the geophysical log and Section 7 on the lithology log and in Figure 3-13.

PB-35: Location is Section 18 on the geophysical log and Section 8 on the lithology log and in Figure 3-13.

WW-1: Location is Section 17 on the geophysical log and Section 8 on the lithology log and in Figure 3-13.

WW-2: Location is Section 17 on the geophysical log, SWSE of Section 19 on the lithology log and SESW of Section 19 in Figure 3-13.

104. Section 4.2, 1st paragraph. ("**...the landfill cover will bar infiltration of precipitation.**") How was this determined? Please provide documentation.
105. Section 4.2.1, 2nd paragraph. ("**Water onsite is prevented from entering the active portion of the landfill by the waste processing corridor drainage ditch around the perimeter of the landfill.**") How will precipitation falling inside the landfill boundaries be prevented from migrating to the active part of the landfill?
106. Section 4.2.1, 2nd paragraph. ("**Removal of this water will begin within 24 hours of the storm event.**") Removal of any runoff which collects in low spots within the landfill must be accomplished as soon as possible to prevent infiltration and the formation of leachate.
107. Section 4.2.6, 2nd paragraph, 1st bullet. Please provide the calculations done for the expected leakage rates.

108. Section 4.2.6, 2nd paragraph, 1st bullet. Was any modeling besides the HELP model done?
109. Section 4.3, 2nd paragraph. ("**...leachate will be removed...in a timely manner...**") Leachate should be removed as soon as it migrates to the sump in order to minimize the head on the liner. (note: also see Item 115 below.)
110. Section 4.4.3. ("**...Roswell weather station...mean annual precipitation is 10.61 inches.**") NOAA precipitation data for Tatum shows an average annual precipitation of 16.14 inches. Because the proposed facility is approximately midway between the two communities, both sets of figures should be used in estimating precipitation.
111. Section 4.4.4. ("**Samples taken from saturated sediments 2,500 feet down-gradient from the proposed site...**") Which samples were taken from saturated sediments 2,500 feet down-gradient from the proposed site?
112. Section 5.1.2, 3rd paragraph. ("**The following wastes will not be accepted: Polychlorinated biphenyl (PCB) liquids that...have PCB concentrations > 500 ppm...**") Will GMI accept liquids with PCB concentrations less than 500 ppm? As stated in 20 NMAC 4.1 Subpart VIII 40CFR268.42(a)(1), liquid hazardous wastes containing PCBs at concentrations between 50 and 500 parts per million must be incinerated or burned in high efficiency boilers.
113. Section 5.2.2.1, 2nd paragraph. ("**If a significant discrepancy is found in the paperwork, the facility will contact the generator for resolution prior to acceptance of the load...**") How will the waste be handled while the discrepancy is being resolved? Will the shipment be kept outside the facility gate? Will it be stored on site? Will it be returned to the shipper?
114. Section 6.2.2, 4th paragraph. ("**The landfill will be inspected...**") Who will do the inspecting? What procedures will be used? What documentation will be done?
115. Section 6.2.2, 5th paragraph. ("**...the leachate collection and removal system...and the leak detection system...will be checked at least weekly...**") To minimize buildup of leachate head on the liner the sump should be emptied as soon as liquids accumulate in it. Weekly inspections may not be frequent enough to accomplish this.
116. Section 6.2.2, 6th paragraph. ("**...active portion of the landfill will either be covered or managed in such a way as**")

- to control the dispersal.") Please describe the procedures for this.
117. Section 6.2.3, 2nd paragraph. ("**...the surface impoundment...will be inspected weekly and after storms to...detect any sudden drops in the level of the impoundment's contents...**") What amount of drop in level will be detected? Also, if sudden drops occur, weekly inspections may not be frequent enough to detect them.
118. Section 6.2.3, 2nd paragraph. ("**The surface of the waste will be visually checked for any sign of the primary liner floating, which may indicate a leak in the liner.**") The unit should be designed, constructed, and operated to avoid leaks and floating liner.
119. Section 6.2.3, 2nd paragraph. ("**Leachate collection pipes and the sump will be inspected for leaks or deterioration ...**") How will this be done?
120. Section 6.4.4, 1st paragraph. ("**The domestic water supply (via underground water line from a spring in the Ogallala formation...)...**") Does this refer to water to be used at the facility? If so, GMI needs to coordinate the intended water use with the State Engineer Office's Water Rights Division. The nearest office is in Roswell and may be reached by phone at 622-6467.
121. Section 6.4.8. ("**If releases to the air occur, they will be handled in accordance with appropriate regulations.**") Please specify what type of releases and which regulations are being referenced.
122. Section 6.5.3, 1st paragraph. ("**Any leachate generated from the landfill will be sufficiently dilute by the time it reaches the LCRS that problems associated with incompatibles in the LCRS sump are not anticipated**") What is this statement based on? How can the dilution level be determined at this time? Are leachate compatibility problems possible in the LCRS away from the sump?
123. Appendix 6A, "Example Inspection Checklists". ("****For any 'no' answer, complete the Remedial Actions section below.**") For some of the inspections a yes answer will require remedial actions.
124. Section 7.4.1.1, 4th paragraph. ("**...fire department personnel will respond immediately.**") Does this refer to GMI employees or other persons. If an off-site fire department responds to emergencies, what is the estimated response time?

125. Section 7.4.1.1, 9th paragraph. ("**...if immediate action is required to protect a local community population...**") Persons using the nearby Mescalero Sands recreational complex and travelers at the rest stop on Highway 380 north of the facility need to be protected also.
126. Section 7.4.5.3, 1st paragraph. ("**The surface impoundment will be removed from service if the level of liquids in the impoundment suddenly drops...**") How much of a drop in level will require shutdown of the unit? How will this be measured?
127. Section 7.4.5.3, 1st paragraph. ("**...and the drop cannot be attributed to known flowrate changes into or out of the impoundment.**") What known flow out of the impoundment will occur?
128. Section 7.4.5.3, 1st paragraph, 5th bullet. ("**...the impoundment will be emptied.**") Please provide a detailed plan for emptying the surface impoundment.
129. Section 7.4.5.3, 1st paragraph, 6th bullet. ("**The Director will be notified in writing...within seven days...**") Notification should be to the Chief of the Hazardous and Radioactive Materials Bureau. A 24-hour oral report should precede the 7-day written report.
130. Section 7.4.5.3, 3rd paragraph. ("**...in compliance with 264.22[a]...**") NMED is unable to identify this reference.
131. Section 7.5.2, 4th paragraph. ("**Any release...greater than...1 pound must be reported...**") Any release which may impact the environment must be reported. Quantity, by itself, is insufficient, in determining reportability.
132. Section 7.5.2, 7th paragraph. ("**Within 15 days...submit a written report...**") The written report must be submitted within 7 days.
133. Section 7.5.2, 7th paragraph. ("**The report must include...**") Add to this list:
 - a) the source and cause of any release to the environment and
 - b) actions taken to mitigate damage due to the release.
134. Section 7.6, 3rd paragraph. ("**An up-to-date list of all satellite and 90-day accumulation areas...will be... provided to the NMED inspectors upon request.**") Any satellite and 90 day accumulation areas, if not shown on Figure 1-2, the "Conceptual Site Master Plan", must be

described, and indicated on a map, for consideration as SWMUs or Areas of Concern.

135. Appendix 7A. The correct street address for the Hazardous and Radioactive Materials Bureau is 2044 Galisteo Street, P.O. Box 26110, Santa Fe, New Mexico 87502. The Environment Department's emergency phone, for nights and weekends, is (505) 827-9329. NMED recommends adding CHEMTREC to the list of emergency contacts. CHEMTREC may be reached at (800) 494-9300.
136. Section 9.2.6, 3rd paragraph. ("**The leachate will be used to irrigate the cap vegetation and any excess will be released to the stormwater retention basin.**") To what standards will the leachate be treated prior to this use or disposal?
137. Section 9.3, 2nd paragraph, 1st bullet. ("**The landfill cover will be inspected monthly...**") Who will do the inspecting? What procedures will be used? What documentation will be done?
138. Section 10.2, 2nd paragraph. ("**...minimizing the quantities of virgin products and raw materials allowed into the disposal area...**") Which disposal area is referred to? What products and materials, other than hazardous wastes and their containers, will go to the disposal area?
139. Section 11, 2nd paragraph. ("**...the facility will notify the administrative authority in writing within 30 days of discovery.**") Any releases should be reported by phone within 24 hours and in writing within 7 days.
140. In addition to the preceding items, NMED requests the following information:
 - a) How will sludge be removed from the surface impoundment?
 - b) How will small animals, including birds, be kept out of the surface impoundment?
 - c) How will the landfill's operations layer be compacted without damaging the underlying LCRS and liner? How will this be verified?
 - d) What method will be used to test the landfill's upper drainage layer and its perforated collection pipe? How will this be verified?
 - e) How will the location of any leaks from the surface impoundment or landfill be located?

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References

New Mexico Hazardous Waste Management Regulations, 20 NMAC 4.1, September 1994.

U.S. Environmental Protection Agency, Office of Waste Programs Enforcement and Office of Solid Waste and Emergency Response. RCRA Ground-Water Monitoring Technical Enforcement Guidance Document, OSWER Directive 9950.1, September 1986.

U.S. Environmental Protection Agency, Office of Solid Waste. RCRA Ground-Water Monitoring: Draft Technical Guidance, EPA/530-R-93-001, November 1992.

U.S. Environmental Protection Agency. Waste Management Area (WMA) and Supplemental Wall (SPW) Guidance; Final, EPA/530-R-93-022, June 1993.

U.S. Environmental Protection Agency, Office of Solid Waste. "Liners and Leak Detection Systems for Hazardous Waste Land Disposal Units", 57FR3462 (January 29, 1992), (codified at 40 CFR Parts 260, 264, 265, 270, and 271).

Additional Deficiencies that GMI needs to address:

141. Provide a comprehensive post-closure plan that includes, but is not limited to post-closure security and closure notices. Include long term maintenance, ground water monitoring and reporting activities. Provide a description of the post-closure care of the various units or portions (tanks, surface impoundment...etc) of the subject treatment, storage and disposal facility. The information presented in Gandy Marley's Section 9, pages 7-9 does not fully address the above issues. This requirement is in accordance with 20 NMAC 4.1, Subpart IX, 40 CFR §270.1(c).
142. Provide the dimensions of the surface impoundment (i.e., length, width, depth), its capacity (gallons) and the types of hazardous waste that will be treated by evaporation.
143. Provide a brief description of the physical properties of each of the five storage tanks, including their capacities (in gallons), dimensions (diameters, lengths) material from which the tanks were constructed, the year of manufacture, and how the integrity of the tanks will be maintained during storage of the hazardous waste at the Triassic Park.
144. Submit a summary description of the Triassic park landfill and/or cells, location and dimensions (length, width, and depth) and the types of hazardous wastes that will be disposed of into the landfill.