



MONTGOMERY WATSON
Mining Group

April 6, 1998

(Via: Fed-X)

Mr. Dale Gandy
Gandy Marley, Inc.
P.O. Box 827
Tatum, New Mexico 88267

Re: Response to NMED Request for Supplementary Information on Triassic Park
Hazardous Waste Disposal Facility Permit Application EPA I.D. #NM001002484

Dear Mr. Gandy:

We have prepared a response to each of the NMED comments that were transmitted to Mr. Larry Gandy in a letter dated March 5, 1998. We are forwarding one copy to you and have sent five (5) copies directly to Mr. Ken Schultz for submission to NMED.

The response presented in the attached, addresses each comment. However, based on our discussions with NMED (Mr. Cornelius Amindyas) we are not submitting replacement pages until we have received concurrence from NMED that we have adequately addressed their comments.

If you have any questions or need any additional information, please contact us.

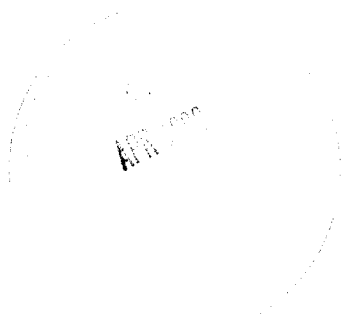
Sincerely,

Montgomery Watson Americas, Inc.

Patrick Corser, P.E.
Principal

attachments

cc: Larry Gandy (w/attachments)
Ken Schultz (w/ attachments)



The New Mexico Environment Department (NMED) Hazardous and Radioactive Materials Bureau (HRMB) has completed review of Gandy Marley Inc.'s (GMI's) Permit application for the proposed Triassic Park Hazardous Waste Disposal Facility (TPDF). After reviewing the subject Application using the appropriate checklists, HRMB has determined that GMI must address the following issues:

NOTE: The quotes printed in "**Bold**" below, are taken directly from the October 1997 Part B Permit Application text submitted by GMI. The responses to each comment are indicated in "*Italics*" to distinguish them from the comment and the quotes.

Global Comments:

1. Include the Hazardous Waste Permit Application Part A in the Table of Contents since a complete RCRA application comprises both Parts A and B.

Responses to Comment 1:

A revised table of contents will be prepared that will incorporate the Part A.

If HRMB concurs with the above response, then revised pages will be prepared and submitted.

2. Volume I, Part B, page 1-1, second paragraph, and the last line of page 1-1: "**This application has been divided into two sections with a total of six volumes.**"

"Section 1 includes the following volumes: Volume I - Part A and Part B, Volume II - Appendix A-M. Section II is divided into four volumes... and incompatible wastes are described in Section 4.3.2.1 of this application."

- Comments: a) HRMB advises that the whole application be identified as Volumes I through VI in order to make it easier for the reviewer to distinguish between Section 2 and Volume II, and also to avoid confusing Volume II with Section II.

Response to Comment 2a:

The preface for the entire document indicates that the submittal has been divided into six volumes. We have elected to maintain the two section designation, because we have referenced Section I and Section II in numerous places within the submittal and therefore, this would require submitting numerous revision pages. We will revise the preface page to indicate Section I rather than Section 1 and Section II rather than Section 2.

Our logic in using Section I and Section II designation is that Section I contains the regulatory permit information and Section II contains the supporting engineering reports, drawings, specifications, and engineering calculations. Therefore, in the text of the submittal specific references can be made to Section I figures, tables and appendices and not be confused with Section II figures, tables, drawings, and appendices. We hope this response clarifies how the submittal has been prepared and justifies leaving the organization unchanged.

- b) **Volume III: Engineering Report** is referred to in Volume I text, as Section II. Consistency with document title, as explained in comment a) above will avoid confusion during third party review.

Response to Comment 2b:

See response to comment 2a.

- c) **“Water Level Measurement - After the stratigraphically trapped water (Cross-section 3-3, Appendix G)... was encountered...”**

Please specify in what volume of the Part B Permit application Appendix G can be found. This will make it easier for the reader to find the subject Cross-Section.

Response to Comment 2c:

The text should be revised to indicate that the Cross-section 3-3, Appendix G, Section I.

If HRMB concurs with this response, revised pages will be prepared and submitted.

3. i) Volume I, Section 8.1, page 8-1, second paragraph, first sentence: **“At the end of the active life of the facility, it is envisioned that all facilities and structures will be closed and dismantled.”**
- ii) Volume I, Section 8, page 8-1, last paragraph, second to the last sentence: **“For the purposes of this plan it is assumed that all wastes remaining in inventory can either be disposed of directly in the landfill...”**

HRMB recommends that the revised application be written in active voice, and the Permit Applicant should state what activities GMI will conduct. Usage of the active rather than passive voice will remove any doubts of whether or not the proposed waste management at the TPDF will be done as per regulations, and assure the public that all activities at the TPDF will be done (and) not based upon concepts or assumptions at the above sentence suggests.

Response to Comment 3:

Gandy-Marley concurs with comment. Revised pages will be prepared and submitted that will eliminate references to concepts and/or assumptions.

Specific Comments:

4. a) **General Facility Description:** HRMB suggests that Section 1.1.8 in Volume I, page 1-3 titled **“Facility Location”**, precede Section 1.1 (**“General Description”**). This suggested change should introduce the facility to reviewers before they read further about the purpose of the TPDF.

Response to Comment 4a:

Gandy-Marley concurs with comment that some description of the facility location preceding the General Description would be helpful to the reader. However, we suggest that a description of the location of the facility be included in the current "General Description" section. This would allow us to leave the general format of the text the same.

If HRMB concurs with this response, revised pages will be prepared and submitted.

- b) Section 3.4.1.2, Page 3-9, last paragraph, "As shown in Figure 3-8 ("Seismic Activity" Map), there were no recorded earthquakes with a magnitude greater than 3.5 within 70 miles of the proposed site..."

Explain the location of the seismic activity about 2000 feet directly south of the proposed TPDF. Based on the scale of the map of Figure 3-8 (i.e., 1 inch = 2000 feet), the circles representing earthquake magnitude in the legend seem to suggest that the seismicity was between the magnitudes of 4.5 and 4.9, and that the distance was much nearer than the 70 miles stated.

Response to Comment 4b:

It is proposed that Section 3.4.1.2, Page 3-9, last paragraph be revised as follows:

"As shown in Figure 3-8, there were no recorded earthquakes with a magnitude greater than 3.9 within 70 miles of the proposed site and no recorded seismic activity within a radius of 45 miles."

Also, change scale on Figure 3-8 from 1" = 2000' to 1 inch = 80 miles.

If HRMB concurs with this response, revised pages will be prepared and submitted.

- c) Volume I, Section 3.6.2.3, page 3-21, "Lower Dockum Aquifer" second paragraph, second sentence: "Two holes (WW-1 and WW-2) were drilled to approximately the base of the Triassic section."

HRMB suggests that the water wells WW-1, and WW-2 in the above quoted paragraph be connected to Figure 3-18 where they are shown. In addition, Figure 3-18 should illustrate the location of the borehole PB-14 to assist the reader in linking the text and the map (Figure 3-18).

Response to Comment 4c:

Section 3.6.2.3, page 3-21, second paragraph, second sentence will be revised as follows. "Two holes (WW-1 and WW-2) were drilled to approximately the base of the Triassic section and encountered water from the Lower Dockum Aquifer (Figure 3-18)." Also, add hole PB-14 to Figure 3-18.

If HRMB concurs with this response, revised pages will be prepared and submitted.

- d) Volume I, Section 3.6.2.3, page 3-21, "Lower Dockum Aquifer", second sentence: "It is overlain by a thick sequence (600 to 650 feet) of impermeable mudstones that act as an aquitard."

HRMB suggests that Figure 3-19 be cited/included in the above sentence to project to the reader the depth from the ground surface to the water table. This could allay anticipated public concerns about potential ground water contamination during waste management at the TPDF.

Response to comment 4d:

Section 3.6.2.3, page 3-21, second sentence will be revised as follows: "As shown in Figure 3-19, this unit is overlain by a thick sequence (600 to 650 feet) of impermeable mudstones that act as an aquitard."

If HRMB concurs with the above response then revised pages will be prepared and submitted.

5. **Volume I, Drawing Number 1:** Although Drawing # 1 of Part A in Volume I has topographic maps of the TPDF on the required scale of 1:200, the units comprising the facility are not shown. Submittal of Drawing 4 (**Facility Layout**) from Volume III, enlarged to the scale of 1 inch equals to 200 feet should satisfy the requirement specified by 20 NMAC 4.1.900 incorporating 40 CFR §270.14 (b) (19).

Response to Comment 5:

It is proposed that Volume I, Drawing 1, be replaced with Drawing 4, Volume III, enlarged to a scale of 1 inch equals 200 feet.

If HRMB concurs with the above response then revised pages will be prepared and submitted.

6. Provide information on the endangered and threatened species at the TPDF. Describe how GMI plans to conduct hazardous waste treatment, storage, and disposal activities in a manner that will not jeopardize the continued existence of such species as the sand dune sagebrush lizard, the bobcat, the owls, and the antelopes that were seen by HRMB personnel at the Mescalero Cliffs during the 1995 RCRA Facility Assessment study of the site.

Response to Comment 6:

Information regarding the threatened and endangered species at the facility is given in Section 1.2 of the application. The status of the species listed has not changed since the December submittal date, nor have any other target species been identified.

Typically area antelope herds range further south and west of the facility (with the exception of the herds that remain above the Caprock), there have been no antelope sited within the immediate vicinity of the facility in the last several years. This is also true of the bobcat although it is possible that a small population could exist in the area, bobcats typically range closer to a permanent source of water such as the Pecos River located several miles to the west. However, GMI will take measures to ensure that the facility impacts on the wildlife population are minimized to the extent possible. To facilitate this effort all waste areas (i.e., surface impoundment and landfill) will be operated in a manner to prevent intrusion by

area wildlife. The surface impoundment will be covered with bird netting. This is standard practice in the area for oil field locations and the materials for such a cover are readily available. The landfill will have a daily cover placed over the face as described in Section 2.5.1.7. In addition, the perimeter fence around the active portion of the facility, or processing area will be constructed in such a manner to limit the movement of area wildlife to the extent possible.

The following sentence will be added to Section 1.2:

"GMI will continue to monitor the existence of threatened or endangered species in the area. Should any threatened or endangered species be identified within the facility area GMI will take measures to ensure that these species are protected. GMI will implement protective measures for the wildlife population in the area. These measures include the use of restrictive fencing around the operational portions of the facility and the use of protective netting over the evaporation pond.

If HRMB concurs with the above response then revised pages will be prepared and submitted.

7. Volume I, Section 2.3, page 2-9, paragraph 4, the last sentence; **"Waste will be transferred from the tanks to the stabilization unit either by pumping into transfer tankers or by direct piping."**
- a) Explain what measures will be taken during waste transfer from tanks to the stabilization units and to the surface impoundment, to protect the health of the workers, and spillage of the waste to the environment.

Response to Comment 7a:

It is proposed that Section 2.3.12 be added as follows:

2.3.12 Transfer of Liquids from Liquid Waste Storage Tanks to the Stabilization Facility and to the Surface Impoundment

Transfer of liquids from the liquid waste storage tanks to the stabilization facility will be accomplished either by direct piping to the facility or by tanker trucks approved for liquid waste transfer. Approved tanker trucks, such as vacuum trucks or DOT approved tankers, will be used to transfer liquids from the storage tanks to the surface impoundment. Tanker trucks will be cleaned following a transfer operation to ensure that subsequent transfers do not result in mixing of incompatible or reactive wastes. Similarly, if direct piping to the stabilization facility is used to transfer liquids, the pipelines will be cleaned prior to using the pipes for any subsequent incompatible waste transfer.

Personnel performing liquid waste transfer operations will comply with all PPE requirements and transfer operation procedures including spill cleanup. Impervious concrete coatings will be applied to the liquid waste storage tank containment area and the surface impoundment discharge station. Hose/pipe connections will be inside the concrete containment area boundaries.

- b) **Volume II, Appendix L:** Provide a map showing evacuation routes for personnel (at the TPDF) in case of emergency.

Response to Comment 7 b:
 Add Figure to Volume II, Appendix L

Figure No. ___ (TBD). *Emergency Alarm and Regrouping Area Locations*

Response: Specific evacuation routes are not shown on Figure No. ___ (TBD) because evacuation routes will depend on the prevailing wind direction, the location of the spill, fire, or other emergency, and the location of the personnel. As discussed in Appendix L, once notified by the alarm system that a spill, fire, or other emergency condition involving a release of contaminants exists, personnel will move in a direction up wind of the emergency location to the nearest regrouping area and await EC instructions.

8. Describe procedures for the maintenance of all waste sampling equipment during final closure of the Facility. Stipulate the precision and accuracy of the sampling equipment.

Response to Comment 8:
We do not believe that this information is required for a Part A and B Permit submittal. However, we expect that similar procedures for waste sampling equipment maintenance and precision and accuracy to those used during operations will be used during final closure.

9. Provide a laboratory quality assurance/quality control (QA/QC) program for hazardous waste and soil samples at closure, and identify the QA/QC procedures for each analytical method.

Response to Comment 9:
An off-site laboratory will be used for analysis of hazardous waste and soil samples at closure. The off-site laboratory will be an EPA approved laboratory with an internal QA/QC program and specific procedures for each analytical method.

10. Volume I, Section 8.1, page 8-1: **“Closure Activities”**

Prior to the commencement of closure activities, GMI is required to notify the Secretary of NMED at least 60 days prior to the date GMI expects to begin closure of the TPDF. GMI is also required to notify the Secretary 45 days before the closure of the surface impoundment, container storage units, and storage tanks. Incorporate this information into the application to comply with the standards specified by 20 NMAC 4.1.500 incorporating 40 CFR § 264.112 (d).

Response to Comment 10:
This information will be incorporated into the description of the closure activities (Volume I, Section 8.1)

If HRMB concurs with the above response then revised pages will be prepared and submitted.

11. Volume I, Section 8, page 8-1, last paragraph, second to the last sentence: **“For the purpose of this plan it is assumed that all wastes remaining in inventory can either be disposed of directly in the landfill, treated at the on-site treatment facility prior**

to disposal in the landfill, or returned to the generator if either of the previous two options are not available.”

Provide a detailed description of the methods for transporting any remaining waste to the generator during final closure of the TPDF.

Response to Comment 11:

If required, the Hazardous Materials could be returned to the generator utilizing the same method of transportation that was used to deliver the material to the site (e.g., end dump trucks).

12. Provide detailed information that addresses the following requirements specified by 20 NMAC 4.1.500 incorporating 40 CFR § 264.112 (b) (4):
- a) methods for sampling soil at closure, and the approximate number of samples to be taken from each unit of the TPDF, methods for testing the soil samples taken; and

Response to Comment 12a:

Soil sampling is discussed for each of the TSDf units in Section 8 of Volume I. The discussion provides the number of samples and the analysis of the samples. Samples will be obtained using standard sampling methodology.

- b) what measures GMI will take to remove contaminated soil when laboratory sample results indicate contamination. Explain how the contaminated soil will be disposed of, and the final destination of the soil.

Response to Comment 12b:

Contaminated soils will be removed for disposal and the area resampled until the sampling and analyses indicate that the area meets the performance standard provided in Section 8.3. Contaminated soils will be disposed of in accordance with the regulations applicable to the contaminate of concern. If the landfill portion of the facility is still operational and the contaminated soil meets the waste acceptance criteria for the landfill it will be landfilled at GMI. If the GMI landfill cannot accept the waste it will be manifested and shipped to an appropriately licensed disposal facility.

13. Volume I, Section 8.1.2.4, page 8-5, last paragraph, last sentence: “**Sample results will be compared against the closure performance standard presented in Section 3.8.**”

Explain what measures GMI will take when the concentration of hazardous constituents in soils taken from the evaporation pond, tank storage area, container storage unit, and stabilization area exceed the standards of Section 8.3 [i.e., three standard deviations or 3σ]. Include a discussion of what measures GMI will take to control a release that is statistically significant causing an increase in pH or results over background values for applicable waste specific constituents.

Response to Comment 13:

See response to comment 12b. Any releases from the facility will be immediately addressed. Any contaminated materials will be removed and treated as previously described.

14. Volume I, Section 3.7.1, page 3-31, second paragraph, last sentence:

“The most effective monitoring program will involve vadose zone monitoring.”

- a) Provide a list of the indicator parameters, waste constituents, reaction products to be monitored, and the background ground water concentration values for the proposed parameters.

Response to Comment 14 a:

It is expected that liquids in the vadose sump could occur from two sources. The first is consolidation of the overlying clay liner draining into the sump. This water is expected to be uncontaminated. The second source is leakage from the landfill. This liquid is expected to be similar to the leachate that is collected from the primary sumps. After the start of operations of the landfill, the leachate that is collected and removed from the primary sump will be analyzed to determine its constituents. Based on this analysis a select series of parameters will be identified that can be used to identify leachate from consolidation water. Thereafter, whenever liquids are detected in the vadose sump, they will be removed and sampled. Samples will be analyzed for leachate characteristics. If any of the leachate parameters are identified, the samples will be tested for the complete EPA Appendix IX parameters. If leachate is confirmed to be present in the vadose zone sump, then corrective action measures will be implemented.

- b) Provide the proposed sampling and analysis procedures for the vadose zone, and the statistically significant increase in any constituent or parameter identified at any compliance point monitoring well.

Response to Comment 14 b:

Vadose sumps for the landfill and evaporation ponds will be monitored for the presence of liquids whenever the primary or secondary sumps are monitored. See references to comment 14a regarding statistically significant increases in any parameter.

- c) Provide the proposed well locations for long term monitoring of the landfill during the post-closure period.

Response to Comment 14 c:

No additional landfill monitoring well locations are proposed for post-closure period monitoring. As stated in Volume I, Section 8.2.5 Vadose Zone Monitoring System, the landfill's vadose zone monitoring system will be maintained and monitored throughout the post closure care period. Sampling, analysis, inspection, and monitoring of the Vadose Zone are also discussed. Therefore, the only monitoring points would be the sumps of the landfill and the evaporation ponds.

15. Volume I, Section 5.4.2.2, page 5-9: Although this section is titled “**Landfill and Surface Impoundment**”, the latter is not even mentioned in the paragraph, please address this issue.

Response to Comment 15:

Volume I, Section 5.4.2.2 The Landfill and Surface Impoundment, add the following paragraphs to the end of the section:

The area surrounding the evaporation pond facility will be graded to carry stormwater runoff towards the drainage ditch to the south of the evaporation pond area. This ditch will ultimately empty into the site stormwater detention pond. The perimeter of the evaporation ponds is elevated to prevent stormwater run-on into the ponds from the surrounding areas.

The HRMB concurs with the above response, revised pages will be prepared and submitted.

16. **Volume II, Appendix A-M:** Provide a stand alone Table of Contents for Volume II Appendices, to guide the interested reader, as to what information each drawing, map or Cross-Sections contain.

Response to Comment 16:

A complete Table of Contents will be added to all Volumes.

If HRMB concurs with the above response, then revised pages will be prepared and submitted.

17. Volume I, Section 8.4, “Closure Schedule”, last paragraph, last sentence, “**The facility requests closure scheduled for 450 days and 360 days for the evaporation pond and landfill, respectively.**”

Since the Triassic Park Waste Disposal Facility has not yet been constructed, the Permittee may request an extension for closure deadline during closure period, when the Secretary has determined that GMI complied with all applicable regulatory requirements for requesting a modification, and GMI has demonstrated that final closure activities will, of necessity, take longer than 180 days to complete, as specified in 20 NMAC 4.1.500 incorporating CFR §264.113.

Response to Comment 17:

Volume I, Section 8.0 Closure and Post-Closure of Permitted Units, delete Figure 8-1, Closure Schedule (Days).

Volume I, Section 8.4 Closure Schedule,

*delete 1st sentence of 3rd paragraph
delete 4th, 5th, 6th, and 7th sentences of 3rd paragraph
delete last two sentences of 4th paragraph*

If HRMB concurs with the above response then revised pages will be prepared and submitted.

18. Volume I, Section 8.2.8, page 8-11, "**Amendment of Plan**":

This section should contain information that the request to amend the Closure Plan include:

Amended Waste Analysis Plan;
 Ground Water Monitoring Plan;
 Amended Closure Plan;
 Amended Post-Closure Plan;
 Updated Closure Cost Estimates;
 Updated Post-Closure Care Plan;
 Updated Financial Assurance Plan for Closure;
 Updated Financial Assurance Plan for Post-Closure; and
 Contingent Corrective Measures.

Response to Comment 18:

The following will be added to Section 8.2.8

"A request for changes to the post-closure plan will include the following items if appropriate;

*Amended Waste Analysis Plan;
 Vadose Monitoring Plan;
 Amended Closure Plan;
 Amended Post-Closure Plan;
 Updated Closure Cost Estimate;
 Updated Post-Closure Care Plan;
 Updated Financial Assurance Plan for Closure;
 Updated Financial Assurance Plan for Post Closure; and
 Contingent Corrective Measure.*

If HRMB concurs with the above response then revised pages will be prepared and submitted.

19. Volume I, Section 11.2.5, first bullet: "**Records that will be kept in the facility operating record include:**

- **the equipment list discussed in Section 12.2.1**

Please correct this to read: Section 11.2.1.

Response to Comment 19:

See response to Comment 20.

20. Provide information that addresses compliance with all test methods and procedures specified by 20 NMAC 4.1.500 incorporating 40 CFR § 264.1063. Include the following:

- a) Leak detection procedures;
- b) No detectable emissions leak detection procedures;

- c) Test methods for organic concentrations of wastes;
- d) Resolution of disputes;
- e) Sampling method;
- f) Test methods to determine waste state; and
- g) Performance tests for control device efficiencies.

Response to Comment 20:

GMI has elected to not accept waste with organic concentrations greater than 10 percent (by weight) or greater. Therefore, these requirements will not apply.

Volume I, Section 11.2 40 CFR SUBPART BB, change to Section 11.2 40 CFR 264 SUBPART BB, delete entire section, replace with the following paragraph:

Because wastes with organic concentrations greater than 10 percent by weight will not be stored in the liquid waste storage facility, in the surface impoundment or treated in the stabilization facility, these facilities will not be subject to 40 CFR 264 Subpart BB regulations. Therefore, equipment such as pumps, compressors, pressure relief devices, sampling equipment, connecting system, and valves will not contain or contact hazardous wastes with organic concentrations of 10 percent or greater by weight.

21. **Volume I, Section 11.2.5: "The facility will provide a semi-annual report to the Environmental Protection Agency and New Mexico Environment Department....:**

Provide a description of the contents of the above named semi-annual report, which complies with the reporting requirements specified by 20 NMAC 4.1.500 incorporating 40 CFR §264.1065.

Response to Comments 21:

See Response to Comment 20.

22. **Volume I, Section 11.3.1, second to the last sentence on page 11-3 under "Waste Determination", "...however, the facility may choose to test a representative sample of the waste in certain situations."**

Provide a detailed description of a definition of the "certain situations" referred to in the above sentence of item number 22.

Response to Comments 22:

Volume I, Section 11.3 Subpart CC, change to Section 11.3 40 CFR 264 SUBPART CC, delete entire section, replace with the following paragraphs:

The Triassic Park Waste Disposal Facility will not be subject to the Subpart CC requirements for tanks and surface impoundments because these facilities will not be used to manage wastes containing volatile organic concentrations greater than 500 ppmw.

Fifty-five gallon drums and roll-off box containers may hold hazardous waste that contains greater than 500 ppmw volatile organic compounds. All 55-gallon drums and roll-off boxes stored at the facility will have covers and meet Department of Transportation (DOT) requirements or packaging of hazardous waste for transport under 49 CFR 178. Therefore, no additional controls will be required for 55-gallon drums or roll-off boxes.

If HRMB concurs with above response then revised pages will be prepared and submitted.

23. **Volume I, Sections 11.3.4 (Applicability to Tanks) and 11.3.5 (Applicability to the Stabilization Process), page 11-4, last paragraph of each section: "Final design documentation will be included as part of the operating record for the facility."**

Provide the final design documentation that is referred to above in item number 22.

Response to Comments 23:

See Response to Comment 22.