

GRCC 06

**State of New Mexico  
ENVIRONMENT DEPARTMENT**

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RETURN RECEIPT REQUESTED**

June 29, 2006

Ed Riege  
Giant Refining Company,  
Route 3, Box 7  
Gallup, New Mexico 87301

**SUBJECT: NOTICE OF DEFICIENCY (NOD) RESPONSE TO  
REMEDY COMPLETION REPORT  
SWMU # 8, RAIL ROAD RACK LAGOON  
GIANT REFINING COMPANY, CINIZA REFINERY  
EPA ID #: NMD000333211  
HWB-GRCC-06-001**

Dear Mr. Riege:

The New Mexico Environment Department (NMED) has performed a technical review of the Giant Refining Company, Ciniza Refinery's (Permittee) *Remedy Completion Report SWMU #8, Railroad Rack Lagoon*, in accordance with 20.4.2.200.A(7) NMAC. NMED has determined the Report for SMWU #8 is not adequate and revisions are necessary before it can be approved. NMED therefore hereby issues this Notice of Deficiency (NOD).

1. The Permittee must review the Report to ensure all tables, figures, and appendices are accurately and descriptively titled to match the information stated in the text (e.g., Figure 2 is missing from the Table of Contents). The information shall be presented in a format to minimize confusion to the reader. NMED further recommends the Permittee revise the table titles to reference the general locations where the samples were collected as well as providing the dates of the excavation activities. This will help the reader minimize the need to cross-reference the text when reviewing the tables.

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2. The Permittee must include a section that describes sampling methods and procedures.
3. All tables must be revised to include acronym definitions or provide an acronym list for the document; (e.g., Table 1 must define *na*, *SVAs*).
4. The Permittee must utilize the New Mexico Environment Department's Total Petroleum Hydrocarbons Screening Guidelines (NMED TPH), dated November 2005, available at <http://www.nmenv.state.nm.us/hwb/guidance.html>. All data tables must be revised to include the appropriate screening level for diesel range organics (DRO), found in Table 2b (unknown oil) in the NMED TPH screening guidelines.
5. **Page 5, paragraph 2:** The Report states, "Samples for which cumulative RO and MRO exceeded..."

**NMED Comment:** This sentence appears to contain a typographical error in which the "RO" should be "DRO". The Permittee must correct or clarify this statement in the text.

6. **Page 7, paragraph 3:** The Report states, "The samples were analyzed for general chemistry parameters, VOCs including analysis for DRO and MRO..."

**NMED Comment:** Volatile organic compound (VOC) analysis does not include DRO and motor oil range organics (MRO). Concentrations of DRO are determined by a separate analysis and are an indicator of detectable concentrations of semi-volatile organic compounds (SVOCs). The Permittee must revise the sentence or sentences to clarify DRO and MRO as separate analyses and not inclusive of VOC analysis.

7. **Page 7, paragraph 3:** The Report states, "NMED required additional analysis for SVOs in samples where cumulative DRO and MRO exceeded 500 mg/kg."

**NMED Comment:** This sentence appears to contain a typographical error in which the "SVOs" should be "SVOCs." The Permittee must correct or clarify this statement in the text.

8. **Page 7, paragraph 3:** Paragraph 3 states "Giant commenced excavation of the railroad lagoon in November 2004.....The samples were analyzed for general chemistry parameters, VOCs including analysis for DRO and MRO, and RCRA metals as listed on the Skinner list. NMED required additional analysis for SVOs in samples where cumulative DRO and MRO exceeded 500 mg/kg. ...Table 1 is a summary of the analytical result for the samples."

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**NMED Comment:** Samples results from RR-E-1-Wall N, RR-W-1-Wall S, RR-BP-1, and RR-BP-2 from the November excavation and found in Table 1 detected DRO or cumulative DRO and MRO above 500 mg/kg. SVOC analysis does not appear to have been conducted for these samples as SVOC data is not found in Table 1 and the laboratory results are not found in Appendix I.

The Permittee must update Table 1 to include the SVOC analysis and include the SVOC laboratory reports in Appendix I or provide an explanation as to why the SVOC data was not collected.

- 9. Page 7, paragraph 3:** Paragraph 3 states "...and a total of 14 samples were collected from undisturbed soils at the bottom and sides of the excavation." The text and Table I refer to 14 samples submitted for analysis during the November 18, 2004 sampling round. However, the cover sheet for the laboratory report in Appendix I states only 13 samples were received and only 13 data sets are present. The results for sample RR-E-1-Wall-S is presented in the summary table, but missing in the laboratory analytical report.

**NMED Comment** The Permittee must rectify this discrepancy. If data exists for sample RR-E-1-Wall-S, then it must be included in Appendix I. The Permittee must revise the report accordingly.

- 10. Page 7, paragraph 3 and Page 5 paragraph 3:** Paragraph 3 of page 7 states, "The analysis of the soil samples showed low concentrations of VOCs to be present remaining in two sampled locations along the north and south sides of the lagoon (E-1 Wall S and W-1-Wall N)" and similarly stated on page 5, paragraph 3. However, page 5, paragraph 2 refers to the same sampling locations but the sentence has replaced VOCs with SVOCs.

**NMED Comment:** It is unclear if the north and south side walls had detections of VOCs, SVOCs, or both. The Permittee must clarify the above discrepancies in the report and state which chemical parameters are being referred to.

- 11. Page 7, paragraphs 3 and 4:** These paragraphs refer to Tables 1, 6, and 9. Table 1 presents the analytical results prior to additional excavation while Tables 6 and 9 summarize final sampling results.

**NMED Comment:** NMED correspondence with the Permittee during early April 2006, determined that the comparison of soil analytical results to the Water Quality Control Commission (WQCC) Standards was an error in the report. The Permittee must revise all tables and text to eliminate reference to the WQCC standards and must apply the NMED TPH guidelines.

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It is not clear, from the tables and text, which excavation events the Permittee collected soil samples to confirm that contaminant concentrations are below the New Mexico soil screening levels (NM SSLs) and TPH screening guidelines. The Permittee must clarify, throughout the report, which samples are the confirmation samples. The Permittee must also clarify in the text which "final sampling results" Table 6 and 9 are referring to.

- 12. Page 7, paragraph 3; page 11, paragraph 4:** These two paragraphs refer to additional analysis for SVOCs if the combined result of DRO and MRO exceed 500 mg/kg. Concentrations for seven samples collected at or near the inlet pipe were above 500 mg/kg and three out of four samples collected from the sidewalls and bottom of the lagoon had reported concentrations above 500 mg/kg. While the appendices show that SVOCs were analyzed, none of the summary tables include results of SVOC analysis, even when there were detectable SVOCs.

**NMED Comment:** Acenaphthene, 2-4-dimethylphenol, di-n-butylphthalate, fluorene, fluoranthene, 2-methylnaphthalene, naphthalene, N-nitrosodi-n-propylamine, phenanthrene, and pyrene were all detected SVOCs and should have been included in the summary data tables. The Permittee must revise its summary tables to include, at a minimum, all detections of SVOCs.

- 13. Page 8, paragraph 1:** Paragraph 1 discusses the amount of soil removed during the initial excavation of the lagoon, amounting to approximately 2,119 yards of soil.

**NMED Comment:** The Permittee must revise the unit of measurement to cubic yards of soil rather than yards of soil.

- 14. Page 8, paragraph 1:** The last sentence of the paragraph refers to photos of the lagoon, taken during excavation activities, provided in Appendix 8. The photos are a good representation of what the soils and sides of the excavation look like. However, of the 10 pages of photos, only the thumbnails included on the last page are appropriately dated and labeled. Because labels, dates, and orientation are missing from the other photos, it is unclear what is being shown, except for the general color and texture of lagoon soils.

**NMED Comment:** The Permittee must include on all photos, at a minimum, date, location, and orientation.

- 15. Page 8, paragraph 2:** The Report states, "The lagoon sampling locations are shown on Figure 3, Figure 4, and Figure 5."

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**NMED Comment:** Figure 4 is a revision of Figure 3, and Figure 5 is identical to Figure 4. The titles of Figures 4 and 5 are identical, except for the revision numbers. If they are identical, then the Permittee should delete one of the figures. The Permittee must clarify any differences between Figures 4 and 5 as they appear to be the same figure with different revision numbers.

- 16. Page 9, paragraph 2:** The Report states, "Hall Environmental analyzed each sample for the following parameters:....." and includes a list of EPA Methods for which the samples were analyzed.

**NMED Comment:** Appendix 2 of the Report identifies samples analyzed for SVOCs. However, this analysis was not included in the list of EPA Methods referenced above. The Permittee must revise this list to include the EPA Method used for SVOC analysis.

- 17. Page 9, paragraph 4:** The Report states, "The laboratory report is in Appendix 1." Appendix 1 references the sampling results from the November 2004 sampling event. The cover sheet of Appendix 1 is labeled, "Hall Environmental Laboratory Report – December 13, 2004."

**NMED Comment:** It is not clear what the December 13, 2004 date references. The Permittee must provide an explanation for the December date and revise the date on the Appendix cover sheet to reflect the date of the sampling event or laboratory report as long as it is consistent with the other appendices.

- 18. Page 9, paragraph 4:** The Report states, "Figure 6 shows the locations of the proposed additional lagoon sampling."

**NMED Comment:** Figure 6 appears to be an incomplete engineering drawing. There are no labels indicating the proposed sample locations. The numbers on the drawing (e.g., 640, 1000, 1900, 1, 2, and 5) are not defined. The sampling locations can only be inferred from the descriptions presented in the text of the Report. Additionally, page 11, paragraphs 2 and 4 make reference to Figure 6, which show the locations of confirmation samples collected during the August 19 and 22, 2005 sampling. It is unclear whether these sampling locations are represented on Figure 6. The Permittee must revise Figure 6 to provide a legend and sample collection locations, including confirmation sample locations. The information presented in the figure must match the information presented in the text.

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- 19. Page 9, paragraph 5:** The Report states, "Pictures of the excavated pipe are in Appendix 8."

**NMED Comment:** Referring to Comment 14, the majority of pictures included in Appendix 8 are not labeled. It is unclear which picture refers to the area surrounding the excavated pipe, except for one thumbnail labeled "South end of pipe, Covered." The thumbnails are low resolution, presented in black-and-white, and do not convey much visual information. The Permittee must either include a larger photo that is appropriately labeled, or eliminate the reference to the photo of the excavated pipe.

- 20. Page 10, paragraph 1:** The Report states, "Figure 7 and Figure 8 show the locations of the additional pipe sampling."

**NMED Comment:** Figure 7 is unclear. The legend on Figure 7 describes the meaning of WS, WN, and BTM, but no such acronyms appear in the figure. Figure 7 states, "Three samples taken at each site," but does not indicate what is meant by each site. The inlet pipe is shown, with arrows pointing to "Series 1, Series 2, Series 3, and Series 4;" presumably, these are the sample locations but it is not clear what is meant by "Series." The Permittee must revise Figure 7 to clarify the above discrepancies and explicitly state the meaning of "Series," eliminate a legend that does not belong with the Figure, and clearly identify the additional sampling locations.

- 21. Page 12, paragraph 4:** The Report states, "Figure 9 shows the locations of the resample."

**NMED Comment:** The text describes 10 sample locations (RR-1 through RR-10) and implies that these locations are where the inlet pipe was resampled. These locations are not labeled on Figure 9. Instead, there are unlabeled numbers and arrows pointing to the pipe that are difficult to correlate with the text. The Permittee must revise Figure 9 so that it matches the description provided in the text. If there were 10 locations that were resampled and these sampling locations have been assigned names, then they must be appropriately labeled in the figure.

- 22. Page 12, paragraph 4:** The Report states, "Table 8 is a summary of the [concrete inlet pipe] sampling." However, Table 8, on p. 36 of the Report, is labeled "August 30, 2005 Lagoon Sampling Results: Volatiles"

**NMED Comment:** The Permittee must revise the title of Table 8 to accurately reflect its description in the text of the Report. It is associated with the inlet pipe, not the lagoon.

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- 23. Page 12, paragraph 5:** Appendix 6 of the Report contains a duplicate copy of the entire Remedy Completion Report, minus the Tables, Figures, and Appendices.

**NMED Comment:** The Permittee must remove these pages from Appendix 6 as they are redundant, or provide an explanation as to why they are included.

- 24. Page 13, paragraph 1:** The Report refers to Figures 10 and 11 as showing the locations where confirmatory samples were taken relative to the inlet pipe excavation.

**NMED Comment:** These figures are inadequate. The figures show two entirely different views of the pipe excavation. The figures are unclear regarding the confirmatory sample locations, sample locations are circled and undefined, and the sample location names do not match those described in the text. The Permittee must revise Figures 10 and 11 to accurately and descriptively match what is stated in the text and appropriately label and describe exactly what is shown in the figures.

- 25. Page 16, paragraph 1:** The Report states, "Table 6 and Table 9 summarize the final confirmatory sampling results of the lagoon and inlet concrete pipe and compare them to the regulatory cleanup criteria."

**NMED Comment:** It is unclear if Tables 6 and 9 contain the inlet concrete pipe sampling results since the table titles only identify the month that excavations occurred. The Permittee must revise the table titles to clearly identify which excavation is being represented. See Comment No. 11.

- 26. Page 6 (general):** The Report describes the overflow ditch and fan-out area to the Railroad Rack Lagoon.

**NMED Comment:** The Report does not address any recent investigation to determine if residual contamination is present at the overflow ditch and fan-out area locations. There appears to be limited information pertaining to past investigations as well.

The overflow ditch and fan-out area are considered part of SWMU #8 and are addressed in the Permittee's RCRA Part A and Part B Post-Closure Permit Application, Volume III, Appendix I.8, Section 3.0 *Site Location and Description, page 2*. If additional characterization information is not available for the overflow ditch and fan-out area, then the Permittee must submit a supplemental work plan for investigation of these areas. The investigation of the overflow ditch and the fan-out area is necessary to ensure that residual contaminants are not present above the New Mexico Soil Screening Levels and the NM TPH guidelines. Test pits may be utilized to collect confirmation samples. The

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supplemental investigation work plan can be submitted in letter format. At minimum, the plan must include the following information:

- a. identification of the approximate dimensions of the over flow ditch and fan-out area,
- b. descriptions of the proposed methods for sample collection (e.g., test pits),
- c. identification of proposed sampling locations. At a minimum, soil samples must be collected from two and five feet below ground surface at each sampling point,
- d. a map identifying the over flow ditch and fan-out area in relation to the lagoon. The map must include the proposed sampling locations, a scale, a north arrow, and any other pertinent information, such as structures or drainages,
- e. laboratory sampling analysis that includes DRO, SVOCs if DRO exceeds 500 mg/kg, VOCs, RCRA metals, and cyanide;
- f. a description on how any generated investigative derived waste will be handled, and
- g. a detailed description of sampling methods and procedures.

The supplemental investigation work plan for the overflow ditch and fan-out area must be submitted to NMED no later than August 29, 2006.

The Permittee must address all comments contained in this NOD and submit a revised report. The revised report shall be accompanied with a response letter that details where all revisions have been made, cross-referencing NMED's numbered comments. The revised report addressing all comments established in this letter shall be submitted to NMED no later than October 2, 2006.



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If you have any questions regarding this letter please contact Hope Monzeglio of my staff at (505) 428-2545.

Sincerely,



James P. Bearzi  
Chief  
Hazardous Waste Bureau

JPB:hcm

cc: J. Kieling, NMED HWB  
D. Cobrain, NMED HWB  
H. Monzeglio, NMED HWB  
W. Price, OCD  
J. Lieb, GRCC  
S. Morris, GRCC

Reading File and GRCC 2006 File

***Remedy Completion Report***  
***For Railroad Rack Lagoon (SWMU No. 8)***  
***Revised Report***



***Giant Refining Company, Ciniza Refinery***

***NMED ID# NMD000333211***

***HWB-GRCC-04-004***

***October 10, 2006***



James Lieb  
Environmental Engineer



Ed Rios  
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