

# ARCADIS GERAGHTY & MILLER



Mr. Richard Boice  
USEPA Region V  
77 West Jackson Boulevard  
Chicago, IL 60604-3590

ARCADIS Geraghty & Miller, Inc.  
14497 North Dale Mabry Hwy.  
Suite 115  
Tampa  
Florida 33618  
Tel 813 961 1921  
Fax 813 961 2599

Subject:

Response to USEPA Letter Dated January 15, 1998  
Verona Well Field Superfund Site

ENVIRONMENTAL

Dear Mr. Boice:

ARCADIS Geraghty & Miller and the Verona Well Field RD/RA Group (VWF Group) prepared this letter in response to USEPA's letter dated January 15, 1998 regarding the VWF Group's alleged non-compliance with the Unilateral Administrative Orders (UAOs) and other issues such as the Annual Monitoring Report, Soil Cleanup Verification Sampling Plan, Revisions to the Record of Decision (ROD) and a proposed meeting. Before addressing the individual issues, we would like to voice our concerns regarding the tone and implications of your letter.

Tampa, Florida,  
10 February 1998

Contact:

Greg Rorech  
Bridget Morello

First, the VWF Group denies that its actions have not complied with the UAOs. All of the VWF Group's actions to date have been implemented with the intent to provide the best available protection of the VWF. Although the VWF Group and USEPA have had differences in opinion on several minor site issues, we have always striven to resolve those issues timely and equitably. The VWF Group also strenuously disagrees with the implication in your January 15<sup>th</sup> letter that the VWF Group and/or ARCADIS Geraghty & Miller have been less than truthful regarding the operation and performance of the VWF RA. We cannot allow such a letter to be placed in the Administrative Record without a formal, detailed response. Furthermore, letters such as your January 15<sup>th</sup> letter offer nothing beneficial toward resolution of any outstanding issues, but most certainly increase the length of time and money necessary to resolve such issues. In the past we have requested that USEPA be more aware of this effect and, therefore, take a less hostile approach to resolving outstanding issues. Lastly, the VWF Group is concerned that your January 15<sup>th</sup> letter ignores the greatest threat to the successful operation of the VWF RA - the City's plans to operate unlined lagoons in the vicinity of the blocking wells that could materially degrade the effectiveness of those wells.

Extension:

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The following sections provide detailed responses to issues raised in your January 15<sup>th</sup> letter, and should clarify the Administrative Record.

Annual Monitoring Report

In accordance with the Groundwater and Air Monitoring Plan (GWAMP), ARCADIS Geraghty & Miller, on behalf of the VWF Group, submitted the Annual Monitoring Report to USEPA on January 30, 1998, as scheduled. Copies of that report also were submitted to CH2M Hill, MDEQ, City of Battle Creek (City) and Consumers Power. The Annual Monitoring Report summarizes the operating data, hydraulic data, air data, and water quality data collected during the first year of operation of the VWF RA.

Letter to City Dated December 12, 1997

ARCADIS Geraghty & Miller, on behalf of the VWF Group, submitted a letter to the City dated December 12, 1997 regarding the results of evaluations performed pursuant to the meeting on October 7, 1997. Copies of that letter were sent to USEPA and MDEQ. In the event that your copy was misplaced, a new copy of that letter is attached hereto.

On February 3, 1998, ARCADIS Geraghty & Miller and Ken Kohs (of the City) discussed the letter contents. It is our understanding that the City is still evaluating the December 12<sup>th</sup> letter and considering potential actions to address the impact of the new lagoons and excessive well field production rates on the performance of the VWF RA. As mentioned in the Annual Monitoring Report, and discussed with Ken Kohs, the City's actions in operating the well field will determine the effectiveness of the VWF RA. Thus, operation of the treatment lagoons and a long term Well Field Management Plan must be resolved before the City commences its planned operation of the new treatment system this spring. Ken Kohs mentioned that the City would be available for a meeting to discuss the issues presented in our December 12<sup>th</sup> letter. Because of the serious potential threat of these actions by the City on the successful operation of the blocking wells, the VWF hopes that the USEPA will work with us and the City to resolve these matters.

Treatment System Flow Capacity

The VWF Group agrees with your statement that consistent operation of the VWF RA wells at their design flow rates (totaling 2700 gpm) is important, and that the treatment system should have the capability to treat up to the maximum anticipated total flow rate of 2973 gpm. To that end, since startup in 1996, the VWF RA has been operated to the best of our ability with immediate implementation of corrective actions as necessary to restore operation and improve performance of the system when alarm conditions or equipment failures occurred. Furthermore, we have proactively implemented system modification in order to minimize alarm conditions and maintain performance. Contrary to the suggestion in your letter, the VWF Group and ARCADIS Geraghty & Miller have repeatedly provided USEPA with verbal and

written detailed descriptions of operating data, as well as operational problems and actions to address those problems. The following bullets summarize our efforts to communicate the operational information to you:

- Letter to USEPA dated January 9, 1997 - **Description of pre-final inspection and plans to address action items identified during the inspection (V24 low flow and water carryover).**
- Fax to USEPA dated February 3, 1997 - **Informing agency of wet well pump failure and resultant reduced flow rates from VWF RA wells.**
- Fax to USEPA dated February 6, 1997 - **Follow-up information regarding wet well pump failure and implementation of corrective action.**
- Project Progress Report to USEPA dated February 10, 1997 - **Summary of operating problems identified during January 1997 (including V24 low flow and water carryover), and actions to address those problems.**
- Project Progress Report to USEPA dated March 10, 1997 - **Summary of operating problems identified during February 1997 (including wet well pump failure and resultant reduced flow from VWF RA wells, V24 low flow and water carryover), and actions to address those problems (including pump seal replacement, testing V24 water quality, construction of a new demister).**
- Project Progress Report to USEPA dated April 10, 1997 - **Summary of operating problems identified during March 1997 (including wet well pump failure and resultant reduced flow from VWF RA wells), and actions to address those problems (including pump seal oil replacement).**
- Fax to USEPA dated May 1, 1997 - **Informing agency of scheduled system shutdown per City's request for electrical system modifications.**
- Monitoring Report for the First Quarter of Operation of the VWF RA dated April 1998 - **Submitted to agency on April 16, 1997. Presents a detailed summary of operating data for the first quarter of operation of the VWF RA, as well as operational problems and corrective actions implemented (or proposed) to rectify those problems.**
- Letter to USEPA dated May 2, 1997 - **Provides responses to issues raised by USEPA in letters dated January 15 and 17, 1997, including potential long term wet well pump repairs and associated reduced VWF RA well flow rates.**

- Project Progress Report to USEPA dated May 15, 1997 - Summary of operating problems identified during April 1997 (including wet well pump failure), and actions to address problems (including pump seal oil replacement, new demister installation).
- Fax to USEPA dated May 23, 1997 - Informing agency of well GMA-2D failure and corrective actions.
- Project Progress Report to USEPA dated June 6, 1997 - Summary of operating problems identified during May 1997 (including wet well pump failure), and actions to address problems (including pump seal oil replacement, repair of electrical lead to pump at well GMA-2D).
- Construction Completion Report and Operation and Maintenance Manual dated June 1997 - Submitted to USEPA in accordance with the UAO Scope of Work.
- Project Progress Report to USEPA dated July 21, 1997 - Summary of operating problems identified during June 1997 (including wet well pump failure), and actions to address problems (including pump seal oil replacement, cleaning of well V24 to restore design flow rate).
- Letter to USEPA dated July 21, 1997 - Responses to agency comments on the Monitoring Report for the First Quarter of Operation of the VWF RA, including system operating data logs.
- Project Progress Report to USEPA dated August 8, 1997 - Summary of operating data for July 1997, including a summary of individual VWF RA well flow rates per USEPA's request. (Flow rates had not previously been identified as a system operating statistic which USEPA wanted reported.) Also summarizes potential problems arising from the City's excessive production rates (per letter to City dated August 7, 1997).
- Project Progress Report to USEPA dated September 11, 1997 - Summary of operating problems identified during August 1997 (including wet well pump failure), and actions to address problems (including pump seal oil replacement, autodialer repair). Also presents individual VWF RA well flow rates per USEPA's request.
- Site Meeting on October 7, 1997, attended by USEPA, CH2M Hill, MDEQ, Geraghty & Miller and VWF Group representatives, pursuant to previous USEPA correspondence and conference calls. Operation and maintenance issues were discussed including, but not limited to wet well pump repair/retrofit, spare pump, and heater repair. A site walkthrough also was performed.

- Project Progress Report to USEPA dated October 10, 1997 - Summary of operating problems identified during September 1997 (including wet well pump failure and resultant reduced flow from VWF RA wells, modification of well V22 by City, heater failure), and actions to address problems (including pump seal oil replacement, heater repair strategy). Also presents individual VWF RA well flow rates per USEPA's request.
- Letter to USEPA dated October 29, 1997 - Presents a summary of the site meeting on October 7, 1997, and the anticipated schedule for correcting operational problems including wet well pump failures.
- Project Progress Report to USEPA dated November 10, 1997 - Summary of operating problems identified during October 1997 (including wet well pump failure), and actions to address problems (including pump seal replacement, inspection of pump impellers and wear rings). Also presents individual VWF RA well flow rates per USEPA's request.
- Telephone conversation on November 19, 1997 between USEPA, CH2M Hill and Geraghty & Miller regarding the wet well pump problems and corrective actions. Geraghty & Miller informed USEPA of the detailed hydraulic analyses underway and the potential corrective actions under consideration. USEPA and CH2M Hill verbally agreed that Geraghty & Miller was proceeding correctly.
- Project Progress Report to USEPA dated December 9, 1997 - Summary of operating problems identified during November 1997 (including water carryover), and actions to address problems (including schedule for heater repairs). Also presents individual VWF RA well flow rates, and calculation of average flow rates and percent of design rates per USEPA's request.
- Letter to USEPA dated December 9, 1997 - Response to USEPA's letter dated November 20, 1997 regarding a summary of the November 19<sup>th</sup> telephone conversation listed above. Clarified information discussed during the telephone call and understandings reached regarding implementation of corrective actions.
- Project Progress Report to USEPA dated January 12, 1998 - Summary of operating data for December 1997, and actions to address problems previously identified (including heater repairs). Also presents individual VWF RA well flow rates, and calculation of average flow rates and percent of design rates per USEPA's request.
- Telephone conversation on January 14, 1998 between USEPA and ARCADIS Geraghty & Miller regarding clarification of information provided in the

December Project Progress Report, including an update on the status of the wet well pump corrective action.

Given the foregoing communications regarding system operation, the VWF Group is concerned at the suggestion in your January 15<sup>th</sup> letter that the VWF Group has not kept USEPA informed of operating problems. Thus, the VWF Group believes it has complied with Paragraph 65 of the UAOs.

USEPA's concern that the VWF RA be operated at design flow rates should not cause it to overlook the most salient measure of system performance - protection of the well field. Although the VWF RA wells have predominantly pumped less than design flow rates since startup, all data presented to USEPA to date indicate that the remedy is adequately protecting the VWF as intended. USEPA's claim of non-compliance with the approved remedial design (pursuant to UAO Paragraph 50), therefore, even if technically correct, overlooks the big picture.

#### Corrective Action for Wet Well Pumps

Because the wet well pump corrective actions, commenced on January 23, 1998, as discussed in detail in the Annual Monitoring Report, are all that should be required to meet the design yield, we seek relief from the USEPA to forego the unnecessary expense of preparing a Work Plan for the corrective actions (as requested pursuant to Section X of the UAOs). We believe the information provided in the Annual Monitoring Report clearly identifies the source of the wet well pump failures and the phased approach for corrective actions. As an update to the information provided in the Annual Monitoring Report, we are pleased to inform you of the following: 1) wet well pump 1 has been retrofitted and was re-installed on February 9, 1998; and 2) a purchase order was issued on February 4, 1998 for one new 36-hp, 10-inch impeller pump which is scheduled to be delivered to CETC by February 26, 1998. This new pump will be installed in place of wet well pump 2, and pump 2 will be sent back to the manufacturer for retrofit to begin the phased retrofit schedule.

When the new pump is installed, the system will consist of two 36-hp pumps and two 30-hp pumps which should provide, at a minimum, the 2700 gpm design flow rate (and the VWF RA well flow rates will be adjusted accordingly to their design flow rates), provided the two 30-hp pumps do not experience seal failures before each is retrofitted with the new base plate (as discussed in the Annual Monitoring Report). Also, it should be noted that the corrective action will provide the system with a spare wet well pump for use during future service events. We will keep you informed of the status of the wet well pump corrective actions as new information becomes available.

### Flow Data and System Performance

The USEPA questions the flow data provided to date, and therefore, the performance of the system. The system performance, i.e., protection of the VWF, is clearly documented in the Annual Monitoring Report. Likewise, the individual well flow data presented in Table 2 of the Annual Monitoring Report reflect the total extent of available data for 1997, as well as information requested by USEPA in the January 15<sup>th</sup> letter. Furthermore, the January 1998 Monthly Project Progress Report (dated February 5, 1998) provides USEPA with all of the information requested in the January 15<sup>th</sup> letter regarding system downtimes, flow data, and average flow calculations.

We believe these data address USEPA's requests for additional flow data even though such data were not originally a reporting requirement. Let us know if you are not satisfied with the present data reporting format.

### Soil Cleanup Verification Sampling Plan

On November 24, 1997, Geraghty & Miller received USEPA's letter (dated November 20, 1997) regarding disapproval of the Soil Cleanup Verification Sampling Plan (Sampling Plan) which had been submitted on October 15, 1997. The letter specified a revised Sampling Plan was due to USEPA within 21 (business) days of our receipt of that letter, i.e., December 22, 1997. The VWF Group and Geraghty & Miller issued a letter to USEPA dated December 9, 1997 officially requesting an extension for re-submittal of the Sampling Plan, as well as resolution of outstanding issues. USEPA's January 15<sup>th</sup> letter states that since a revised Sampling Plan was not submitted to USEPA by December 22, 1997, the VWF Group is out of compliance with the UAOs (Sections XIV and XXII). If, in fact, USEPA wanted to deny our request for a submittal extension, should not that denial have been issued immediately upon USEPA's receipt of our December 9<sup>th</sup> letter so we could timely resubmit? We disagree that non-compliance has occurred, especially since we clearly stated (December 9<sup>th</sup> letter) that some of the issues raised in USEPA's November 20<sup>th</sup> letter had to be clarified and resolved before a revised Sampling Plan could be submitted due to discrepancies between those issues and previous agreements between the USEPA and the VWF Group. Lastly, your January 15<sup>th</sup> letter is inaccurate regarding agreements that supersede previously documented plans.

Because the VWF Group intends to pursue soil closure at the Annex and Paint Shop as soon as possible, we will submit a revised Sampling Plan this month. We believe it makes the most sense for the revised Sampling Plan to be structured as a soil cleanup verification plan, but it will include the hot-spot biased sampling suggested in your

January 15<sup>th</sup> letter (i.e., the five additional Annex boring locations and the 4 additional Paint Shop boring locations). The revised Sampling Plan also will clearly address the 1996 preliminary soil sampling at the Annex, as well as a discussion of operating data that indicate the SVE systems should not be restarted (as we originally intended to do). Since the preliminary soil sampling data collected at the Annex in 1996 indicate that the SVE system was tremendously effective in removing VOCs (roughly 97% reduction of VOCs in the soils in the vicinity of the preliminary samples), we have every reason to believe the cleanup verification sampling will demonstrate that the majority of soil at each site is below cleanup criteria (specified in Table 1 of the Sampling Plan).

Depending on the extent of residual contamination, if any, it may make sense to reevaluate the path to site closure. We may find that the most cost effective and technically practical approach to remediate residual hot spot contamination (if that is all that's left) will not be the present SVE systems.

The one outstanding issue that will not be addressed in the revised Sampling Plan is the sample depth interval. As required, the original Sampling Plan was prepared in accordance with the MDEQ Guidance Document titled *Verification of Soil Remediation* (April 1994, Revision 1). However, that document does not specify a vertical sampling depth or distribution. The original Sampling Plan suggested a reasonable procedure, taking into account the Guidance Document's desire for random sampling, consisting of soil samples being collected from each boring, field screening, and submittal of the sample exhibiting the highest field screening result to the laboratory for analyses. In the event none of the samples in a given boring exhibited significant results on the field screening instrument, we intended to submit the sample from the deepest sample interval for laboratory analysis, or from the interval that exhibited the highest concentration in that vicinity during the 1993 sampling event, if applicable. Since there is no USEPA or MDEQ guidance for interval sampling, we maintain that this approach is adequate and justified. However, we are willing to discuss this issue further.

Contrary to the assertion in your January 15<sup>th</sup> letter, the 1996 Annex soil sampling was reported to USEPA prior to the event as follows: 1) the proposed soil sampling was discussed during the October 25, 1996 conference call with USEPA and MDEQ, and 2) the Annex soil sampling schedule was reported in the monthly Project Progress Report for October 1996 (dated November 12, 1996). The assertion in your January 15<sup>th</sup> letter that there has been a violation of Paragraph 67 of the UAOs, therefore, is not valid. Thus, USEPA's statement that the VWF Group would intentionally collect data at the site for personal reasons and withhold that data from USEPA is entirely unwarranted.



ROD Revisions

We are aware that specific procedures are required for any formal changes to the ROD. We have repeatedly requested an Explanation of Significant Differences (ESD) for changes to the final VWF RA, cleanup criteria, and institutional controls. USEPA has repeatedly changed its stance on the need for an ESD. At this time, we are unclear of USEPA's current stance on this issue, and we reserve the right to request an ESD in the future specifically for revision of soil and groundwater cleanup goals.

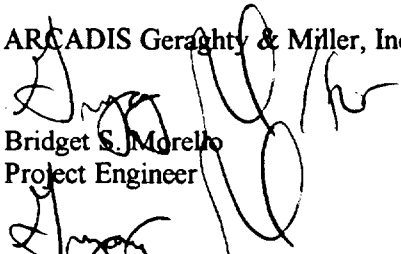
Proposed Meeting

Although several of the proposed meeting topics listed in the USEPA's January 15<sup>th</sup> letter may have already been addressed and resolved by this letter, ARCADIS Geraghty & Miller and the VWF Group agree that a meeting with USEPA would be productive to resolve outstanding issues. We also believe a meeting with the City is of paramount importance. ARCADIS Geraghty & Miller and VWF Group representatives are available to meet with you on any of the following dates: March 3, 4, 5, or 6, 1998. We propose that the meetings be held in Chicago and request Roger Grimes' attendance at the meetings. Please contact us to finalize the meeting schedule.

If you have questions please do not hesitate to contact us.

Sincerely,

ARCADIS Geraghty & Miller, Inc.



Bridget S. Morello  
Project Engineer



Gregory J. Rorech, P.E.  
Associate

Attachments

Copies:

VWF Technical Committee (w/o attachment)  
Beth O'Brien, MDEQ (w/o attachment)  
Paul Boersma, CH2M Hill (w/o attachment)  
Ken Kohs, City of Battle Creek (w/o attachment)  
Roger Grimes (w/o attachment)