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NSA MID SOUTH
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TRANSMITTAL LETTER FOR DRAFT MONTHLY ACTIVITIES REPORT FOR THE MOBILE
ENHANCED MULTI-PHASE EXTRACTION (MEME) CONDUCTED 10 FEBRUARY 1999
MILLINGTON SUPPACT TN
03/01/1999
BAT ASSOCIATES

BAT

BAT Associates, Inc.

ENVIRONMENTAL HEALTH & SAFETY SERVICES

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Oak Ridge, TN 37830
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March 1, 1999

Mr. John Karlyk
ATTN: Code 1846
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
North Charleston, SC 29419-1910

**RE: DRAFT MONTHLY ACTIVITIES REPORT FOR THE MEME CONDUCTED
FEBRUARY 10, 1999 AT THE NAVAL SUPPORT ACTIVITY MID-SOUTH,
MILLINGTON, TENNESSEE**

Facility I.D. # 0-791 113

Dear Mr. Karlyk:

Enclosed for your review and comment is the above referenced draft activity report. An additional copy will be forwarded to Mr. Randy Wilson for his review. Once received, BAT will incorporate any comments from your organization into the final report.

During the third event at this site (the initial event conducted by BAT under this contract), the extraction wells were configured into two separate extraction well arrays. Eight wells during the first six hours, and two wells during the remaining two hours (MEM-6 and B-3). During the fourth event, the extraction well array was configured with the initial three hours at four wells, the ensuing three hours at four wells, and the final two hours at two wells (MEM-6 and B3).

These well extraction configurations were set up in this manner because of what appeared to be a low volume of product exhibited from wells MEM-6 and B-3 during the first two events. For example, during the first and second events, extraction on MEM-6 and B-3 was conducted for eight hours and the rate of carbon removal was 3 to 14 pounds per hour with a total amount of carbon removed ranging from one to four pounds. During the fourth event MEM-6 and B-3 were extracted for two hours with a total rate of carbon removed ranging from 1.5 to 1.8 pounds per hour. The other reason was due to this site being an active gas station. There was a potential of traffic problems and the configuration was an effort to minimize the least amount of disturbance to the station's business operations.

As you are aware, the offgas concentrations, flow rates, and removal rates were far greater during the third MEME event conducted January 19, 1999. This appears primarily attributed to the number of extraction wells connected to the extraction well array (i.e. eight wells during the first six hours of the third MEME event) as opposed to a smaller number of extraction wells previously utilized at this site (e.g. two extraction wells utilized during the second MEME event). There were no major diversities observed from well gauging data obtained from the four events.

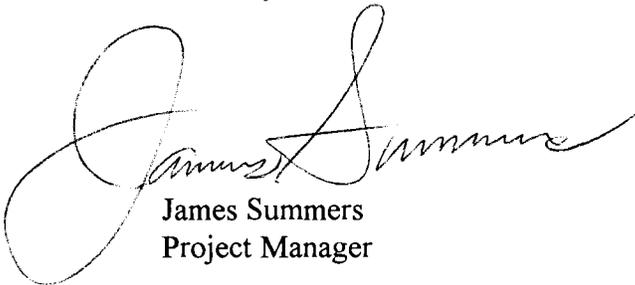
Mr. John Karlyk
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You will note that there was a dramatic decrease in offgas concentration (from 32,000 to 3,600 ppm), flow rates (513 to 257 CFM), and removal rates (from 133 to 6 pounds per hour) during the third MEME event when the transition from eight extraction wells to two extraction wells was conducted following six hours of extraction. Another contributing reason may be the nearly one year time span between the second and third events.

It should be noted that BAT's subcontractor, EcoVac Services, has used the same employee to conduct all four events at this site (with the same apparatus and monitoring equipment), hence, there should be no variances in the data that can be attributed to a difference in approach, methodology, procedures, or equipment. The differences in the data recorded between the second and the third MEME events are rather unusual. However, with using the fourth event well array setup, the total petroleum hydrocarbons removed did decrease from the third event recorded data (i.e. 3708 pounds to 1307 pounds and 611 to 216 equivalent gallons of gasoline) which is more in line with the results from the first and second events.

Should you have any questions or require additional information, please contact me at (423) 481-8105.

Sincerely,



James Summers
Project Manager

CA:JS

cc: R. Wilson (NAS)
File 983019