



GARY E. JOHNSON
GOVERNOR

State of New Mexico
ENVIRONMENT DEPARTMENT

Ground Water Quality Bureau
Harold Runnels Building
1190 St. Francis Drive, P.O. Box 26110
Santa Fe, New Mexico 87502-6110
Telephone (505) 827-2918
Fax (505) 827-2965



PETER MAGGIORE
SECRETARY

PAUL R. RITZMA
DEPUTY SECRETARY

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

November 16, 2000

Harry Davidson
Acting Chief, Restoration Branch
Environmental Management Division
377 ABW/EM
2050 Wyoming Blvd SE
Building 20685, Suite 125
Kirtland Air Force Base, New Mexico 87117-5270

RE: Conditional Approval of Addendum to Stage 1 Abatement Plan, ST-106, Bulk Fuels Facility,
Kirtland Air Force Base, New Mexico

Dear Mr. Davidson:

An addendum to the Stage 1 abatement plan proposal, AP-28, for the site referenced above was received by the Ground Water Quality Bureau (GWQB) of the New Mexico Environment Department (NMED) on September 14, 2000. The abatement plan originally submitted for this facility was conditionally approved in a letter from NMED to Kirtland Air Force Base (KAFB), dated July 11, 2000, and additional requirements were described in a letter from NMED to KAFB, dated July 20, 2000. The addendum to the abatement plan was submitted in response to condition number 4 described in the letters of July 11 and July 20, 2000. Condition number 4 was defined as follows:

If additional investigation of ground-water contamination is necessary, a proposal for that investigation must be submitted to GWQB as part of abatement plan AP-28. The reason for this condition is to comply with 20 NMAC 6.2.4106.C.

The addendum to the abatement plan submitted on September 14, 2000, addresses further investigation of soils at the site and includes a plan to investigate whether ground water has been contaminated as a result of the jet fuel releases.

The initial investigation of the bulk fuels facility included installation of soil borings and analyses of soil samples collected from those borings. Analyses detected contamination of the soil by petroleum hydrocarbons to depths of 200 feet in soil boring SB-25 and 310 feet in soil boring SB-26. The jet

fuel, JP-4, was detected in deep samples in these boreholes. The presence of JP-4 is significant because it has not been used at KAFB since the early 1990's and therefore suggests that the release occurred over a long period of time. KAFB was able to locate inventory records for the bulk fuels facility for the time period of 1996 to present. These inventory records do not cover the period of time in which JP-4 was used at the base, but they indicate a net loss of 157,353 gallons of jet fuel during the approximately 5-year period.

Due to the depth of the detected hydrocarbons, the presence of the JP-4 jet fuel at depth, and the current estimate of lost jet fuel, a ground-water investigation was deemed necessary for this site. The depth to ground water at this site is approximately 450-500 feet below ground level.

In the addendum to the abatement plan, KAFB proposed the following actions:

1. Soil boring SB-26 will be completed with a 2-inch PVC screen in order to be used for soil vapor extraction in the future.
2. One ground-water monitoring well (KAFB-1061) will be installed north of the fuel offloading rack, approximately 50 feet north of the pipeline and approximately 75 feet west of the east end of the loading rack. The well is located in the direction of ground-water flow, and is in the path of the flow of water toward the nearest KAFB supply well, KAFB-15.
3. After installation, ground-water monitoring well KAFB-1061 will be sampled and the water will be analyzed for total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs), and semivolatile organic compounds (SVOCs), using certified EPA Methods.
4. An additional ground-water monitoring well may be installed downgradient of the site if contamination is present in the ground-water sample collected from monitoring well KAFB-1061, or if a perched water zone is detected during installation of well KAFB-1061, a second well may be installed and screened in that perched zone in a location adjacent to well KAFB-1061.
5. If either of the additional wells are installed, water samples will be collected and analyzed for the same parameters described in item 3 above.
6. Four soil borings will be installed within the site area to delineate the horizontal extent of the deep subsurface soil contamination. The borings will be located as follows: one boring will be located northwest of soil boring SB-25, one will be located southwest of SB-25, one will be located northeast of soil boring SB-26, and one will be located southeast of SB-26. The exact locations of these four soil borings will be determined based on data from the original soil borings, from the soil samples collected during installation of the ground-water monitoring well, and from data from other environmental investigation activities at nearby site ST-341.

7. Soil samples will be collected at 5-foot intervals and field headspace analyses will be done using a photo-ionization detector. Borings will be advanced until three consecutive soil samples display no headspace reading.
8. At each boring location, 20 percent of the soil samples will be submitted to a laboratory for analyses. The samples submitted to the laboratory will include the soil collected from the maximum depth of the borehole and from the interval with the highest headspace reading. Samples submitted to the laboratory will be analyzed as follows: all samples will be analyzed for total petroleum hydrocarbons by EPA Method 8015, 50% will be analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8020, and 20% of the samples will be analyzed for volatile organic compounds (including BTEX) by EPA Method 8260 and semivolatile organic compounds by EPA Method 8270.
9. When drilling is complete, the boreholes will be abandoned by filling the borehole with bentonite powder or they may be fully or partially screened with a PVC screen so they may be used during the remediation process.

The addendum to the abatement plan is hereby conditionally approved pursuant to the New Mexico Water Quality Control Commission Regulations, 20 NMAC 6.2, Section 4109.A. Mr. Mark Holmes of KAFB was verbally notified of this approval during a telephone conversation with Jennifer Parker and Jim Mullany of GWQB on September 28, 2000.

The condition for approval of this addendum to the abatement plan is that collection of only one round of ground-water samples from monitoring well KAFB-1061 is not sufficient for a release of jet fuel of this magnitude. If contamination is not present in the first round of samples collected from this or any other well associated with this site investigation, monitoring of these wells must continue on at least a quarterly time period until NMED determines that this is no longer necessary. If contamination is detected in the first round of ground-water samples from any of the monitoring wells associated with this site, monitoring may be required more frequently.

Please note that all requirements for the conditional approval of abatement plan AP-28, as described in the letters to KAFB dated July 11 and July 20, 2000, are still in effect.

Mr. Davidson, Conditional AP Addendum Approval, AP-28
October 16, 2000
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If you have any questions, please contact Jennifer Parker at (505) 827-0523 or Jim Mullany at (505) 827-0212.

Sincerely,



Marcy Leavitt, Chief
Ground Water Quality Bureau

ML:DM:jp

cc: Roland Rocha, NMED/HRMB
Tom Skibitski, NMED District 1 Acting Manager
Jim Mullany, Project Manager, GWQB