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PETER MAGGIORE
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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

December 5, 2001

Dr. Inés Triay, Manager
Carlsbad Field Office
Department of Energy
P. O. Box 3090
Carlsbad, New Mexico 88221-3090

Mr. John Lee, General Manager
Westinghouse TRU Solutions LLC
P.O. Box 2078
Carlsbad, New Mexico 88221-5608

RE: SECOND REQUEST FOR SUPPLEMENTAL INFORMATION (RSI) - TECHNICAL ADEQUACY REVIEW OF WIPP MINE VENTILATION RATE MONITORING PLAN, AND NMED COMMENTS ON WIPP VOLATILE ORGANIC COMPOUND AND MINE VENTILATION RATE MONITORING REPORT FOR JULY 2000 – JUNE 2001 WIPP HAZARDOUS WASTE FACILITY PERMIT EPA I.D. NUMBER NM4890139088

Dear Dr. Triay and Mr. Lee:

The Hazardous Waste Bureau (HWB) of the New Mexico Environment Department (NMED) has reviewed for technical adequacy the May 16, 2000 document entitled "Response to a Request for Supplemental Information." You submitted this document in response to NMED's request of April 13, 2000.

After reviewing this plan against the requirements specified in Permit Conditions IV.J.1 and .2, NMED has found the document to be technically incomplete. The enclosed Attachment 1 lists the requested supplemental information necessary for NMED to evaluate the completeness of the document and to finally incorporate it into the Permit as Attachment Q as specified in Permit Condition IV.J.4.

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Additionally, on October 26, 2001, the NMED/HWB received the WIPP Volatile Organic Compound and Mine Ventilation Rate Monitoring Report (**the Report**). The Permittees submitted the Report in compliance with Permit Condition IV.F.2.b. While the Report was generally thorough, there were some minor items that were confusing to the NMED reviewer and require clarification. These items are included as comments in Attachment 2.

NMED believes that many of the issues raised in the comments in Attachment 2 can be resolved through informal discussion between our respective staffs. However, NMED requests a formal written response to all comments in Attachment 1 and to those comments in Attachment 2 which both parties agree that written clarification or response in the record is appropriate.

Please submit your response to the comments on both the Mine Ventilation Rate Monitoring Plan and the Report within thirty (30) calendar days from the date you receive this letter. NMED may consider a petition for a deadline extension, provided that a written justification and the expected submittal date are given.

If you have any questions regarding this matter, please contact Phillis Stevens at (505) 428-2518.

Sincerely,


Steve Zappe
WIPP Project Leader
Permits Management Program

Attachments: (2)

cc: James Bearzi, Chief, HWB
John Kieling, Manager, Permits Management Program, HWB
Susan McMichael, NMED OGC
Phillis Stevens, HWB
David Neleigh, EPA Region 6
Connie Walker, TechLaw, Inc.
WIPP File - Red '01

**WIPP Mine Ventilation Rate Monitoring Plan
Technical Adequacy Review
Response to Request for Supplemental Information**

The following addresses the adequacy of the May 16, 2000 "Response to a Request for Supplemental Information" (**the Response**), submitted by the Permittees in accordance with NMED's April 13, 2000 "Request for Supplemental Information" (**RSI**). The Response includes "Attachment 1" which provides specific responses to individual comments from the RSI and "Attachment 2" which is the revised "WIPP Mine Ventilation Rate Monitoring Plan" (**the Plan**).

The Plan has been substantially modified since the first submission (November 2, 1999). The Plan was not re-examined for overall technical adequacy.

General Comment

The Response and revised Plan include several misreferences or discrepancies that should be rectified. These include but are not limited to:

- The specific response (Response Attachment 1) to RSI Comment 3 states that Plan Section Q-7b addresses the comment. Plan Section Q-7b, line 13, however, refers to Plan Section Q.E.2, which does not exist. The intended reference would seem to be Plan Section Q-5b, based on corresponding text in the specific response to RSI Comment 3.
- Plan Section Q-5b refers (second paragraph, sixth line) to "...a full entry traverse as described in Section Q.D.2..." The Plan does not contain a Section Q.D.2 nor does it contain any procedure or operation titled 'full entry traverse'.
- Plan Section Q-4d, line one, contains a reference to Section Q.E.2, which doesn't exist. Plan Section Q-4d, paragraph two, line six contains a reference to Section Q.D.2, which doesn't exist.
- Plan Section Q-4c references section Q.E.1, which does not exist.
- Both the specific response to Comment 6 (line four) and the Plan (Section Q5-b, paragraph two, line six) refer to Section Q.D.2, which doesn't exist.

RSI Comment 1: The Response and revised Plan adequately address the comment. Sections Q-1, Q-2, and Q-4 of the Plan incorporate the requested revisions.

RSI Comment 2: The Response and revised Plan adequately address the comment Section Q-5b of the Plan incorporates the requested revisions.

RSI Comment 3: The Response and revised Plan adequately address the comment. Plan Sections Q-7b and Q-8 provide for monthly data verifications requested by the RSI. Also see the General Comment, above, for misreferences related to Comment 3.

RSI Comment 4: The Response and revised Plan adequately address the comment. Plan Sections Q-4, Q-4b, Q-4b(1), Q-7a, and Q-8 b incorporate the requested revisions.

RSI Comment 5: The Response and revised Plan adequately address the comment. Plan Sections Q-4d and Q-5b include the active room ventilation rate monitoring frequencies requested by the RSI. Also see the General Comment, above, for misreferences related to Comment 5.

RSI Comment 6: The Response and revised Plan partially address the comment. Section Q-5b of the Rate Monitoring Plan provides some details concerning the procedures to be followed in making air flow measurements in Active Disposal Rooms. However, Section Q-5b references Subsurface Ventilation and Environmental Engineering by Malcolm McPherson for the details of the method for air flow measurement. This book is over 900 pages long and covers a variety of subjects pertaining to subsurface ventilation. A more specific reference to the cited material is warranted (chapter number and page numbers). Consideration should also be given to providing the referenced material as an appendix to the Plan. Revise the Rate Monitoring Plan to include additional details of the method used to make air flow measurements in Active Disposal Rooms. Also see the General Comment, above for a discrepancy related to Comment 6.

RSI Comment 7: The Response and revised Plan do not adequately addresses the comment. Section Q-4e of the Rate Monitoring Plan states that the quarterly verification checks are performed in accordance with Table D-1 of Permit Attachment D. Section Q-7c of the Rate Monitoring Plan references Table D-1 of Attachment D of the Permit for the procedures followed in evaluating the data generated from the Quarterly Flow Verification Checks. A review of Table D-1 (from the WIPP Hazardous Waste Permit dated August 31, 2001) showed that no procedures for performing the quarterly flow verification check or for evaluating the data obtained during a flow check were included in the table. Table D-1 provides the schedule (quarterly) and identifies the job classifications that will perform the check. Section Q-8 does state that if a quarterly flow verification check shows that the permitted ventilation rates are not being achieved, the Secretary will be informed in writing within five working days. Section Q-8 states also that documentation of quarterly flow verification checks will be maintained as an operating record. However, Section Q-8 does not indicate that the quarterly flow verification checks will be covered in each annual report to the Secretary. Revise the WIPP Rate Monitoring Plan to include a description of the quarterly flow verification check procedure, the location(s) where the flow checks will be performed, and a description of the procedures for data evaluation. Also indicate whether quarterly flow verification checks will be addressed in the annual report submitted to the Secretary under Permit Condition IV.F.2.b.

RSI Comment 8: The Response and revised Plan partially address the comment. The requirements of Permit Condition IV.F.3.b are partially incorporated into Section Q-8. Although the second paragraph of Section Q-8 indicates that the running average mine ventilation exhaust rate will be calculated, the total mine flow will be checked quarterly, and that compliance with the minimum active room ventilation rate will be evaluated monthly, it is not clear that this information will be included in the Annual Report to the Secretary. Revise Section Q-8 to

specifically identify the types of data and analyses that will be included in the Annual Report to the Secretary.

Also, the CAO response indicated that information pertaining to Permit Condition IV.F.3.c could be found in Sections Q-5a, Q-5b, and Q-8 of the revised Rate Monitoring Plan. Sections Q-5a and Q-5b adequately addressed the calculation of the running annual average mine ventilation exhaust rate and the verification of the minimum active room ventilation rate, respectively. While Sections Q-5a and Q-5b provided no information pertaining to notifications, the discussion in Section Q-8 adequately addressed the requirements of Permit Condition IV.F.3.c. Therefore, the revised Rate Monitoring Plan adequately addresses the requirements of Permit Condition IV.F.3.c.

RSI Comment 9: The Response and revised Plan do not adequately address the comment. Although the Response was submitted within the required 30 calendar days, the Response does not adequately respond to RSI Comment 7 or the General Comment issues (which incorporates errors associated with Comments 3, 5, 6, and 7).

RSI Comment 10: The Response and revised Plan adequately address the comment. The Permittees have elected to implement active disposal room ventilation monitoring within thirty (30) calendar days of Plan approval instead of the Permit issuance date and have provided an explanation for the delay, as requested by RSI Comment 10. The Response explains that the delay is because the Permittees have not collected active disposal room ventilation data. The Permittees proposed, in the November 2, 1999 Plan, to monitor active disposal ventilation flow rates only when wastes were actively being emplaced and additional time is required to modify procedures and qualify personnel to implement that requirement.

RSI Comment 11: The Response and revised Plan partially address the comment. Section Q-8 of the Rate Monitoring Plan states that the Annual Report to the Secretary will include descriptions of implementation of and presentation of data and analyses required under the Mine Ventilation Rate Monitoring Plan. No further details are provided. To avoid future misunderstandings as to the expected content of the Annual Report, revise Section Q-8 to clearly indicate that activities, data, and analyses associated with the four types of ventilation monitoring covered by the Mine Ventilation Rate Monitoring Plan will be described and presented in the Annual Report to the Secretary.

RSI Comment 12: The Response and revised Plan do not adequately address the comment. While Section Q-8 states that the Annual Report to the Secretary will include a description of implementation and present the results of data and analysis of the Mine Ventilation Rate Monitoring Plan, it does not explicitly state that the Report will include the annual ventilation monitoring report. Revise the Rate Monitoring Plan to explicitly state that the annual ventilation monitoring report will be part of the Annual Report to the Secretary.

RSI Comment 13: The Response and revised Plan adequately address the comment. Plan Sections Q-4b, Q-4b(1), address the use of the Test and Balance in verifying the action room

ventilation rate, and Q-7a and Q-7b provide information on performing the monthly verification checks.

**NMED Comments on WIPP Confirmatory Volatile Organic Compound and
Mine Ventilation Rate Monitoring Annual Report
For July, 2000 to June, 2001**

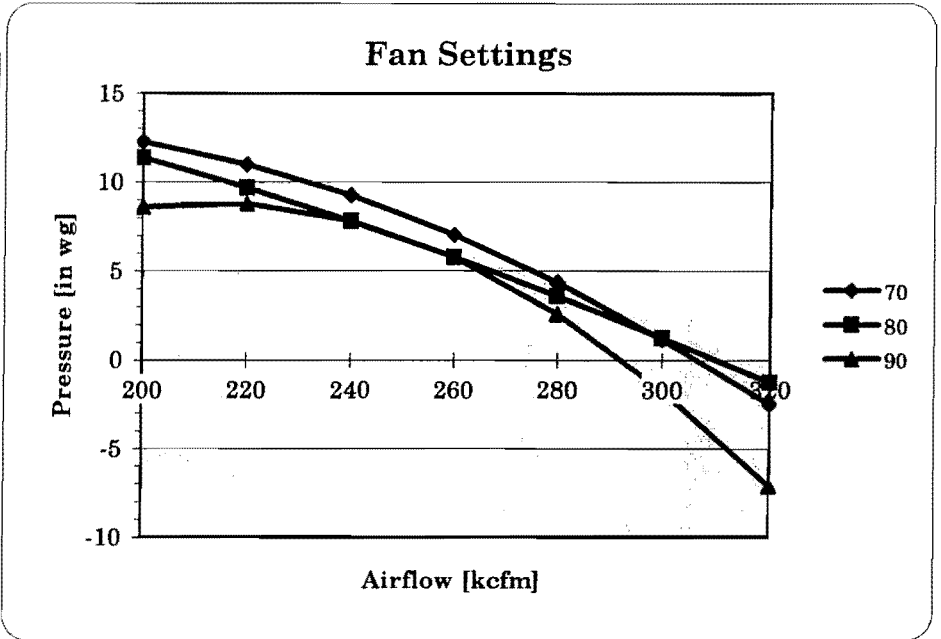
1. In Sections 4.2, 4.3, 6.1 of the Report and Q-5b, Q-9 and listed in Table Q-1 of the response to the Request for Supplemental Information (RSI), instruments are described as being “calibrated, precise, and accurate”. No indication is given as to what specific instruments are used or how often and by what process they are calibrated. Please discuss these issues for each of these instruments.
2. The statement that the “momentary reduction in underground ventilation caused by the realignment or switching underground ventilation fans...does not require verification of air flow in the active disposal room”, (on page 4-3 of the report) is not supported. Please cite the reasons verification is not necessary in these cases.
3. On Page 4-4 of the Report and Q-4b of the RSI, the statement is made that once the ventilation system is updated (by the Test and Balance procedure), “the system will self balance”. Please explain this statement. How will it self balance? Is this an automatic process? Is it a single occurrence or does it happen periodically, and if so, what is the periodicity or signaling event?
4. In the matter of the report of the first of the two (2) events of noncompliance reported in Section 8.0, the NMED agrees that the Radiological Work Permit (RPW) closure can be considered a minor paperwork oversight if all other safety and radiological requirements and policies were observed. Please provide documentation to the NMED that these safety and radiological measures were observed.
5. Concerning the second report of noncompliance in Section 8.0, the NMED remains unconvinced that waste will not be stored on pallets at the TRUDOCKS again. Please indicate how training policies have been changed in order to prevent technicians from repeating this violation of the Permit.
6. The following comments concern the Test and Balance Report prepared by Mine Ventilation Services, Inc. in July 2001.
 - a. At the time of the procedure, the 700A fan was being rebuilt (Section 2.1). Has this fan been repaired and put back on line? How did the absence of this unit affect the Test and Balance procedure?
 - b. Section 3.2 indicates that only the normal, alternate, and filtration modes were described in the report although there are other modes that could have been included. Why weren't these other modes included in the test or discussed in the report?

- c. A statement was made in Section 4.1, page 19, that the bulkhead flashing, and particularly the mandoor frame and seal, be properly maintained. Is this maintenance a scheduled event? If so, how often is it performed? If not, what are the criteria, which prompts a maintenance event?
- d. On page 34, a plot of the 700B Fan performance, pressure vs. airflow, is presented. Equations for the curves are provided but do not conform to the points of the curves (see spreadsheet, attached). For example: for the 70 setting curve, plugging 240 into the given equation yields 9.27 but shows to be approximately 6 on the curve included in the report. Please explain. Are these equations used to generate additional points? Which points? A review of the prior year's Test and Balance Report shows the equations offered therein to adequately describe the curves presented. Why were this year's different?
- e. Please discuss the Resistance Test for the North Shop Regulator 521, specifically, why the east Louver was not operational at the time of the test.
- f. In Section 5, the suggestion is made to replace two (2) Airboss sensors (which are defective) with Flosonic sensors. Has this been done?

**Confirmatory Volatile Organic Compound and Mine Ventilation Rate
Monitoring Annual Report
July, 2000 through June, 2001
Spreadsheet Attachment**

700B Fan Curves
Page 34

| Airflow [kcfm] | Fan Settings | | |
|-------------------|--------------|--------|--------|
| | 70 | 80 | 90 |
| 200 | 12.2618 | 11.383 | 8.617 |
| 220 | 11.0038 | 9.677 | 8.791 |
| 240 | 9.2658 | 7.811 | 7.845 |
| 260 | 7.0478 | 5.785 | 5.779 |
| 280 | 4.3498 | 3.599 | 2.593 |
| 300 | 1.1718 | 1.253 | -1.713 |
| 320 | -2.4862 | -1.253 | -7.139 |



| Setting | Equation |
|---------|-------------------------------------|
| 70 | $y = 0.0006x^2 + 0.1891x - 1.5582$ |
| 80 | $y = -0.0002x^2 - 0.0013x - 19.643$ |
| 90 | $y = -0.0014x^2 + 0.5967x - 54.723$ |

308 Regulator

| North Louver [% Open] | South Louver [% Open] | Total Open [% Open] | Airflow [kcfm] | Diff. Press. [in wg] | Resistance [pu] |
|-----------------------|-----------------------|---------------------|----------------|----------------------|-----------------|
| 0 | 0 | 0 | 1.0 | 3807 | 3807.00 |
| 25 | 0 | 12.5 | 15.1 | 3707 | 16.2581 |
| 50 | 0 | 25 | 36.0 | 3342 | 2.5787 |
| 75 | 0 | 37.5 | 77.5 | 2667 | 0.4440 |
| 100 | 0 | 50 | 117.0 | 1765 | 0.1289 |
| 100 | 25 | 62.5 | 122.2 | 1558 | 0.1043 |
| 100 | 50 | 75 | 130.5 | 1388 | 0.08150 |
| 100 | 75 | 87.5 | 138.0 | 1136 | 0.05965 |
| 100 | 100 | 100 | 145.0 | 934 | 0.04442 |

308 Regulator Curve

