



Department of Energy

Carlsbad Field Office
P. O. Box 3090
Carlsbad, New Mexico 88221
April 12, 2010

Ms. Sarah Cottrell, Deputy Secretary
New Mexico Environment Department
2905 E. Rodeo Park Drive, Building 1
Santa Fe, NM 87505-6303

Ms. Marcy Leavitt, Director
Water and Waste Management Division
New Mexico Environment Department
2905 E. Rodeo Park Drive, Building 1
Santa Fe, NM 87505-6303

Subject: Request for a Temporary Authorization for the Referenced Class 2 Permit Modification to the Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Permit Number: NM4890139088-TSDF to Prevent Significant Disruption of Ongoing Waste Management Activities.

Reference: Letter from David C. Moody, CBFO to J. Bearzi, NMED dated April 12, 2010 transmitting the Class 2 PMR, "Revise Volatile Organic Compound Concentrations of Concern and Update These Values Using Current EPA IRIS Data"

Dear Ms. Cottrell and Ms. Leavitt:

Pursuant to 20.4.1.900 New Mexico Administrative Code (incorporating Title 40, Code of Federal Regulations, Part 270.42(e)), the U.S. Department of Energy (**DOE**) Carlsbad Field Office (**CBFO**) and Washington TRU Solutions, LLC collectively referred to as the Permittees, hereby provide you with the following temporary authorization (TA) request.

The Permittees are requesting a TA per 40 CFR §270.42(e)(2)(i) for the referenced Class 2 Permit Modification Request (**PMR**) entitled "Revise Volatile Organic Compound Concentrations of Concern and Update These Values Using Current EPA IRIS Data" submitted to your office on April 12, 2010.

The Permittees are requesting the immediate use of a revised Concentration of Concern (**C of C**) for carbon tetrachloride of 630 parts per billion by volume (**ppbv**). This value is significantly less than the 1,660 ppbv requested in the PMR and is bounded by the changes that are attributable to the EPA IRIS database changes alone.

In accordance with 40 CFR §270.42 (e)(1), the Permittees are requesting that this TA be effective until the New Mexico Environment Department (NMED) completes the administrative process for the Class 2 PMR, or 180 days, whichever is shortest.

The following summarizes the PMR associated with this TA and provides the explanation of why the TA is necessary per 40 CFR §270.42(e)(2)(ii)(B).

The Class 2 PMR that this TA will implement is needed to revise the C of C values by incorporating current EPA IRIS data. Revision is accomplished by reapportioning the risk associated with the VOCs identified in Module IV, Table IV.F.2.c of the Permit.

The C of C values specified in the Permit represent action levels to assure compliance with environmental performance standards (limits) established by the NMED. This limit for VOCs that are suspected human carcinogens (such as carbon tetrachloride) is one excess cancer death in 100,000 commonly expressed as a risk of 1.0 E-05 over a ten year period. Reapportionment is appropriate since the Permit does not consider the actual historical distribution of VOCs within the waste. Operational records now demonstrate that the risk is predominately attributable to one VOC, carbon tetrachloride, and, based on the Permittees knowledge of the waste inventory will continue to be so. Reapportionment reflects the actual distribution of VOCs in the waste that the WIPP facility is disposing.

Currently, the concentration of carbon tetrachloride, as expressed as a running annual average, is approaching 165 parts per billion by volume (ppbv), its concentration of concern. As of March 10, 2010 the running annual average for carbon tetrachloride is approximately 132 ppbv. If the running annual average reaches the concentration of concern, the Permittees would be required to cease disposal in the active disposal room per Permit Condition IV.F.2.d and install ventilation barriers. Furthermore, if the running annual average exceeds the concentration of concern for six consecutive months, the active hazardous waste disposal unit (HWDU) would also have to be closed. This would significantly disrupt ongoing waste management activities (40 CFR §270.42(e)(3)(C)). This TA is requested to prevent this disruption. Closure is a measure to prevent exposing surface workers to a risk of 1.0 E-05. Given the current VOC distributions in the waste, the total risk from VOC emissions at the point where carbon tetrachloride reaches its concentration of concern will be about 6.2 E-07, well below the repository limit of 1.0 E-05, based on ten years of exposure. The PMR and this request do not revise this repository limit.

The Permittees have concluded, based on actual repository monitoring data, that the portion of the total risk that is assigned to carbon tetrachloride in the current Permit is underestimated and inconsistent with the actual data. Therefore risk for each VOC should be reapportioned based on these data. Additionally, the Permittees are applying several changes that the U.S. Environmental Protection Agency (EPA) has made in the IRIS database used for determination of the C of C values including removing 1, 1-dichloroethene as a carcinogen and updating the risk factors for carbon tetrachloride, 1,1,1-trichloroethane, chlorobenzene, and toluene. These changes are also part of the PMR.

The Permittees believe ceasing disposal in the active room and/or the active HWDU would be premature and unnecessary and would disrupt the normal waste handling process of filling rooms and HWDUs prior to initiating HWDU closure. In addition, it would result in an unnecessary loss of disposal space which also impacts waste disposal operations.

The Permittees first became concerned about the rising levels of carbon tetrachloride in July 2009 and have been working diligently since then to control the emissions. Actions have included the following:

- Additional bulkheads in filled HWDUs
- Additional sealing of bulkheads in filled HWDUs
- Additional bulkheads in the active HWDU between filled rooms and active rooms
- Curtailing the shipment of the waste stream containing the high concentrations of carbon tetrachloride
- Installation of a granulated activated carbon system in one drift of a filled HWDU to determine if this approach will be effective for the control of carbon tetrachloride.

Along with these actions to control the emission of carbon tetrachloride, numerous administrative actions have been taken to protect underground workers from potential hazardous exposure to carbon tetrachloride. These include increased monitoring, entry restrictions in areas of the underground that may have high concentrations of carbon tetrachloride, locks on bulkhead doors where concentrations may be high, enhanced training, and use of personal protective equipment when needed.

While the administrative activities have been successful in protecting workers, none of the activities have been successful enough, either separately or collectively, to significantly reduce the running annual average of carbon tetrachloride. Therefore, in order to avoid having to stop disposal in the open room or HWDU prematurely (i.e., when the risk posed by the VOCs is not exceeding overall repository environmental performance limits), it is appropriate, as detailed in the PMR, to raise the concentration of concern of carbon tetrachloride by updating the unit risk factors and reapportioning the risk associated with other VOCs within the total allowable risk. This reapportionment is based upon VOC concentrations observed in the waste that has been disposed.

This TA is needed to prevent disruption of ongoing waste management activities at the WIPP facility as provided by 20.4.1.900 NMAC, incorporating 40 CFR §270.42(e)(3)(ii)(C). The following disruptions are likely to occur without approval of the TA:

- Assuming the Permittees have initiated contact-handled (CH) transuranic (TRU) disposal operations in Disposal Room 4 of Panel 5, this room would have to be closed, foregoing any remaining waste disposal capacity of the room.
- Disposal of remote-handled (RH) TRU waste in Room 3 would have to cease to allow for disposal of CH TRU waste. This would result in a loss of predrilled RH TRU waste boreholes and RH TRU waste disposal capacity in Room 3.
- Drilling of disposal holes for RH TRU waste in Room 2 would have to cease in order to allow RH TRU waste disposal to move into this room. This would prevent the drilling of sufficient holes in this room to accommodate the anticipated RH TRU waste shipping rates.
- Resources that would be used to prepare Panel 6 for waste disposal would have to be used to quickly ready Room 1 of Panel 5 for drilling operations. This would adversely affect the point in time when Panel 6 would be ready for certification by the NMED and would delay its use for waste disposal operations.

- On a broader scale, the receipt and disposal of the affected waste streams is an important element of the DOE accelerated waste disposal program aimed at using stimulus funding to reduce the risk from TRU waste by cleaning up sites around the nation. The loss of disposal capacity or even the slowing of the disposal process will have adverse impacts on TRU waste management and shipping processes.

This TA will allow time for the processing of the Class 2 PMR for the reappportioning of the risk associated with VOCs, and hence, the revision of the C of C identified in Module IV, Table IV.F.2.c of the Permit as described in the referenced Class 2 PMR. This TA will also allow continued shipment of carbon tetrachloride waste in overpacked containers with lower diffusivity filters. The approval of this TA will prevent disruption of ongoing waste management activities at the WIPP facility. The Permittees will continue their ongoing activities to measure and mitigate potential health impacts of carbon tetrachloride.

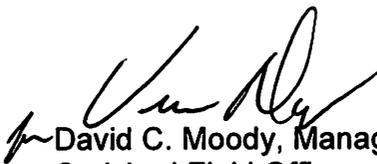
The activity to be conducted under this TA request does not affect any condition or requirement other than Table IV.F.2.c of the Permit. The Permittees are in compliance with the requirements of 20.4.1.500 NMAC, incorporating 40 CFR Part 264. Therefore, this TA would not impact continued compliance and provides sufficient information to ensure compliance with 40 CFR Part 264 standards per 40 CFR §270.42(e)(2)(ii)(C). The period of time of the temporary authorization is less than 5 percent of the ten year exposure period used for establishing the exposure limits in the Permit. Therefore, any incremental risk posed by the higher concentration of concern for carbon tetrachloride is not significant.

For the reason delineated above, the Permittees believe the requirements of 20.4.1.900 NMAC, incorporating 40 CFR §270.42(e) have been met and are requesting the issuance of the TA to prevent the disruption of ongoing waste management activities at the WIPP facility.

We certify under penalty of law that this document and all attachments were prepared under our direction or supervision according to a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on our inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of our knowledge and belief, true, accurate, and complete. We are aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Please contact George Basabilvazo at (575) 234-7488 if you have any questions regarding this correspondence.

Sincerely,


David C. Moody, Manager
Carlsbad Field Office


M. F. Sharif, General Manager
Washington TRU Solutions LLC

cc:

J. Bearzi, NMED *ED
CBFO M&RC
*ED denotes electronic distribution