

NEW MEXICO
ENVIRONMENT DEPARTMENT



Surface Water Quality Bureau

BILL RICHARDSON
Governor
DIANE DENISH
Lieutenant
Governor

1190 South St. Francis Drive, Room N2050
P.O. Box 26110, Santa Fe, NM 87502-6110
Phone (505) 827-0187 Fax (505) 827-0160
www.nmenv.state.nm.us

RON CURRY
Secretary
JON GOLDSTEIN
Deputy Secretary

Original Via UPS
Copy via Telefax - (214) 665-7373

March 20, 2008

Mr. Miguel Flores
Director
Water Quality Protection Division (6WQ)
U. S. Environmental Protection Agency
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Re: **State Certification**

Dear Mr. Flores:

Enclosed, please find the state certification for the following proposed NPDES permit:

City of Santa Fe/Buckman Direct Diversion -- Permit #NM0030848

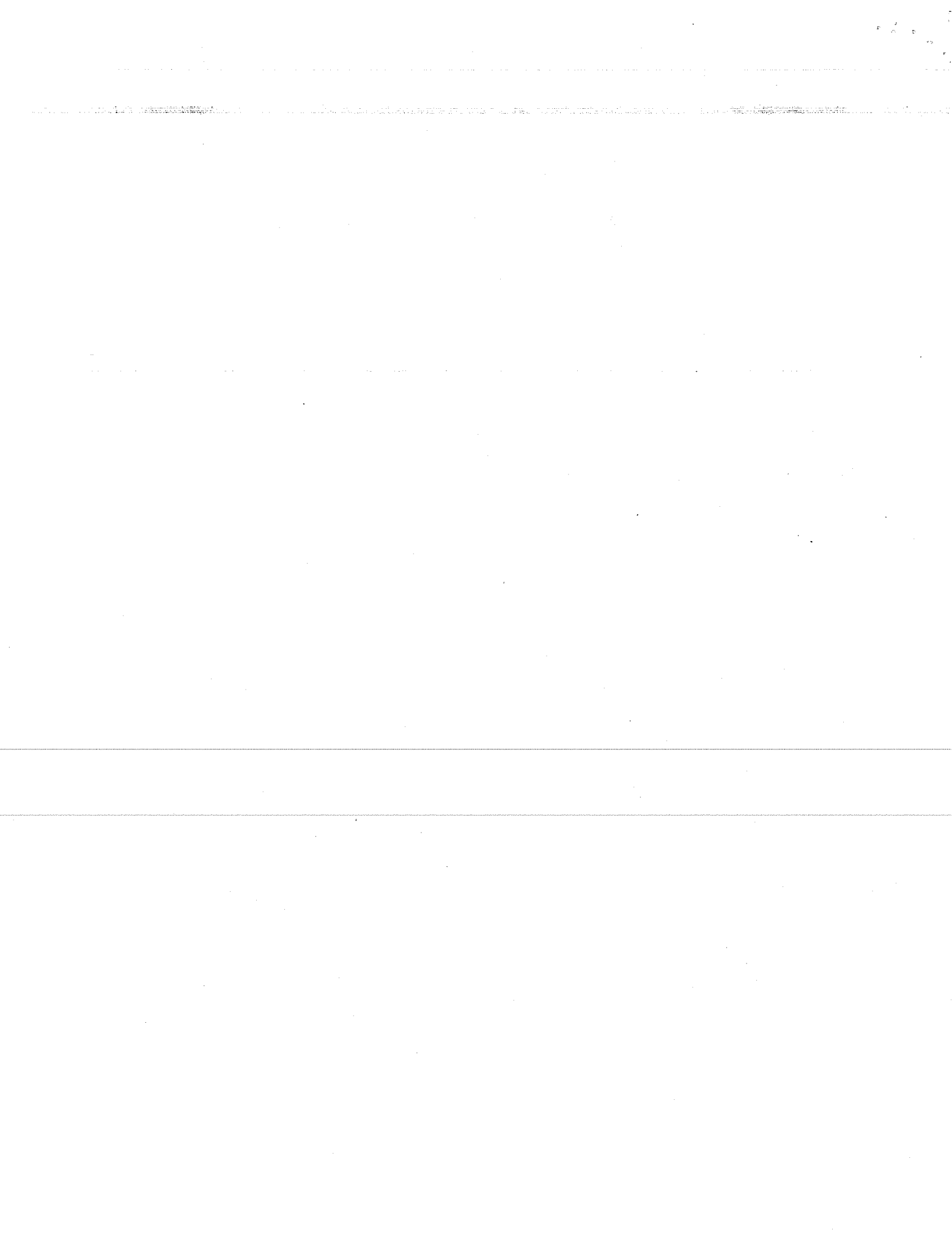
If any, comments and conditions are enclosed on separate sheets.

Sincerely,

Marcy Leavitt, Chief
Surface Water Quality Bureau

cc: (w/enclosures)

Ms. Diane Smith, USEPA (6WQ-NP)
Mr. Rick Carpenter via Certified Mail (7004 0750 0001 3214 4668)
City of Santa Fe
Buckman Direct Diversion
801 West San Mateo
Santa Fe, New Mexico 87505



Mr. Richard Greene, Regional Administrator
Environmental Protection Agency
1445 Ross Avenue
Dallas, TX 75202-2733

Date: March 20, 2008

STATE CERTIFICATION

RE: City of Santa Fe/Buckman Direct Diversion -- Permit Number NM0030848

Dear Mr. Greene:

The New Mexico Environment Department has examined the proposed NPDES permit above. The following conditions are necessary to assure compliance with the applicable provisions of the Clean Water Act Sections 208(e), 301, 302, 303, 306, and 307 and with appropriate requirements of State law. Compliance with the terms and conditions of the permit and this certification will provide reasonable assurance that the permitted activities will be conducted in a manner which will not violate applicable water quality standards and the water quality management plan and will be in compliance with the antidegradation policy.

The State of New Mexico

- certifies that the discharge will comply with the applicable provisions of Sections 208(e), 301, 302, 303, 306 and 307 of the Clean Water Act and with appropriate requirements of State law
- certifies that the discharge will comply with the applicable provisions of Sections 208(e), 301, 302, 303, 306 and 307 of the Clean Water Act and with appropriate requirements of State law upon inclusion of the following conditions in the permit (**see attachments**)
- denies certification for the reasons stated in the attachment
- waives its right to certify

In order to meet the requirements of State law, including water quality standards and appropriate basin plan as may be amended by the water quality management plan, each of the conditions cited in the draft permit and the State certification shall not be made less stringent.

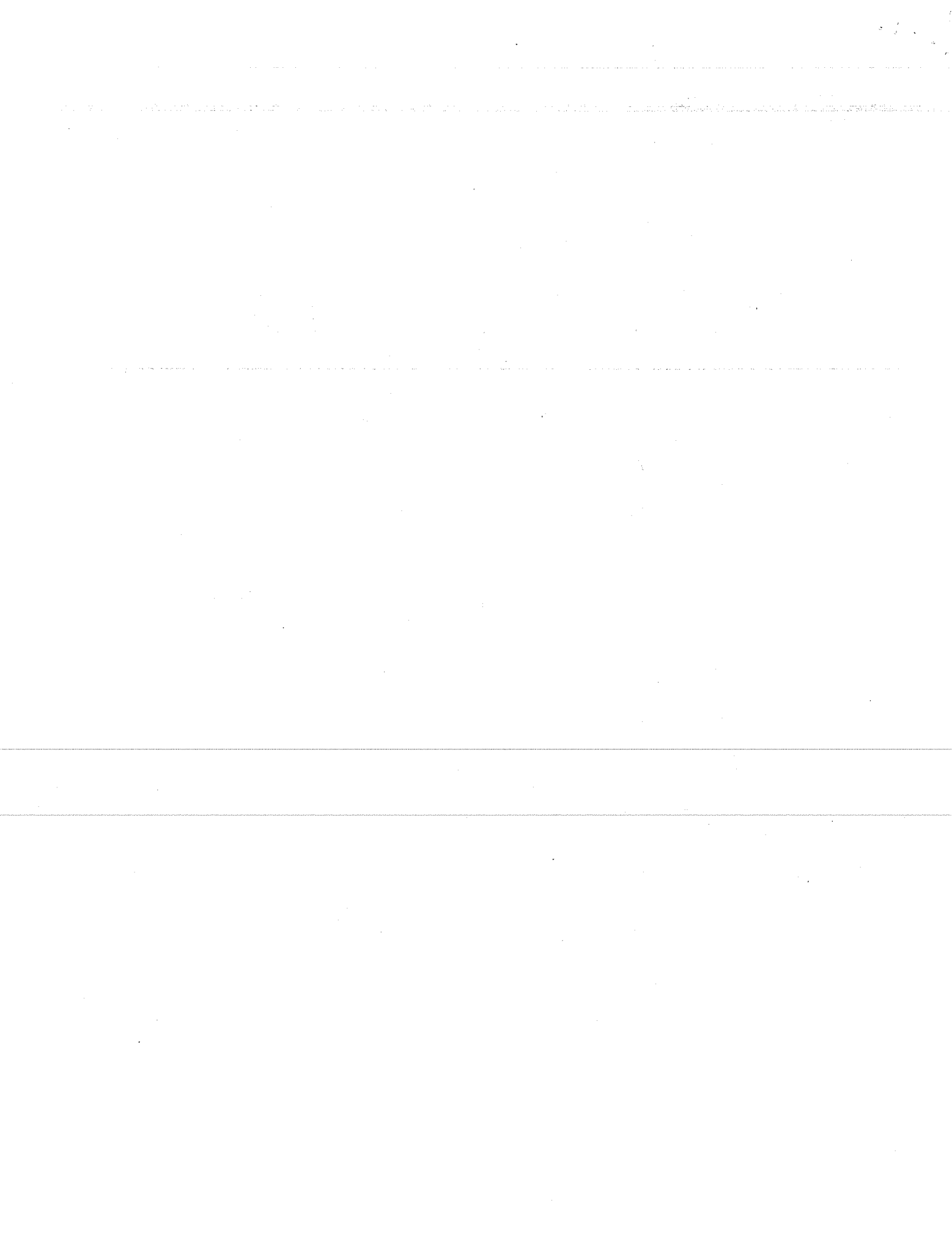
The Department reserves the right to amend or revoke this certification if such action is necessary to ensure compliance with the State's water quality standards and water quality management plan.

Please contact Glenn Saums, (505) 827-2827, if you have any questions concerning this certification. Comments and conditions pertaining to this draft permit are attached.

Sincerely,



Marcy Leavitt, Chief
Surface Water Quality Bureau



**City of Santa Fe/Buckman Direct Diversion
State Certification of the Proposed NPDES Permit
NM0030848
March 20, 2008**

Conditions of Certification

The following revisions are necessary to ensure that discharges allowed under the NPDES permit protect State water quality standards adopted in accordance with §303 of the Clean Water Act (CWA) and the New Mexico Water Quality Act [Chapter 74, Article 6 NMSA 1978]. State water quality standards are published in the document entitled *Standards for Interstate and Intrastate Surface Waters, New Mexico Water Quality Control Commission, 20.6.4 NMAC (As amended through August 1, 2007)* (WQS).

USEPA regulations at 40 CFR 122.44(d)(1)(i) require that permit

[l]imitations must control all pollutants or pollutant parameters ... which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard ...

Condition #1 Numeric water quality criteria for polychlorinated biphenyls (PCBs) applicable to the designated uses identified in the Fact Sheet have been adopted by the state at 20.6.4.900 NMAC. The numeric criteria for PCBs are as follows:

<u>Criterion Category</u>	<u>Numeric Criterion</u>
Wildlife Habitat and Chronic Aquatic Life	0.014 µg/L
Human Health	0.00064 µg/L

Proposed Permit, Part I.A and Fact Sheet, Part VIII.D.4 (c)(2) describes a monitoring and reporting requirement for applicable human health criteria both at outfall 001 and upstream. The New Mexico Environment Department (NMED) has measured concentrations of PCBs upstream of BDD, which were analyzed using the EPA Method 1668 Revision A method of analysis (discussed below), which indicated that PCB concentrations are greater than the state's human health water quality criterion by an order of magnitude. As a consequence, due to these documented upstream concentrations, NMED believes there is a reasonable potential for discharges from BDD to contain PCBs.

PCB contamination of the State's waters and fish stock is a real concern. Recently, through the joint efforts of the New Mexico Department of Health, the NM Department of Game & Fish and the Environment Department, the State issued revised fish consumption advisories that in particular address PCBs found in consumable fish. The advisories are available on the Internet at

<http://www.nmenv.state.nm.us/NMED/advisories/index.html>. Further, EPA has made the following statements about PCBs¹:

a. Health effects. EPA has determined that PCBs cause significant human health effects including cancer, immune system suppression, liver damage, skin irritation, and endocrine disruption. PCBs exhibit neurotoxicity as well as reproductive and developmental toxicity. PCBs are readily absorbed through the skin and are absorbed at even faster rates when inhaled. Because PCBs are stored in animal fatty tissue, humans are also exposed to PCBs through ingestion of animal products.

b. Environmental effects. Certain PCB congeners are among the most stable chemicals known, and decompose very slowly once they are released in the environment. PCBs are absorbed and stored in the fatty tissue of higher organisms as they bioaccumulate up the food chain through invertebrates, fish, and mammals. Significantly, bioaccumulated PCBs appear to be even more toxic than those found in the ambient environment, since the more toxic PCB congeners are more persistent and thus more likely to be retained. PCBs also have reproductive and other toxic effects in aquatic organisms, birds, and mammals.

c. Risks. Toxicity and exposure are the two basic components of risk. EPA has concluded that any exposure of humans or the environment to PCBs may be significant, depending on such factors as the quantity of PCBs involved in the exposure, the likelihood of exposure to humans and the environment, and the effect of exposure. Minimizing exposure to PCBs should minimize any eventual risk.

NMED believes it is important to highlight the growing concern about the impacts of PCBs and the need to take action and NMED has several concerns regarding the proposed permit.

First, the Proposed Permit, Part II, Appendix A specifies a Minimum Quantification Level (MQL) for PCBs of 0.2 µg/L, which is well above both the state wildlife habitat and human health water quality criterion. Additionally, the proposed permit allows the permittee to report a value of zero (0) if a required sample result is less than the specified MQL for that parameter. When actual concentrations of PCBs are greater than state water quality criterion, but are less than the 0.2 µg/L MQL, reporting zeros provides a false sense of security regarding water quality protection.

The EPA MQL of 0.2 µg/L PCB is derived from the EPA Region 6 Minimum Quantification Level Guidance (February 08, 2008). However, EPA's 2008 guidance in the section entitled "Discharger-Specific Quantification Levels" allows:

... [t]he most sensitive method may then be required for analysis. A matrix specific Method Detection Level may be determined for the pollutant as described in 40 CFR 136, Appendix B ... Minimum Quantification Level = 3.3 MDL.

¹ Federal Register Volume 73, No. 45, March 6, 2008 page 12055.

Thus it is possible, within the context of the existing procedure, to establish a more appropriate case-by-case MQL approach to PCB analysis and reporting.

NMED's second concern, which is related to the first concern, involves the sampling and analytical methods to be utilized under the proposed permit to ensure protection of the aforementioned WQS' criterion for PCBs. Proposed Permit, Part III.C.5a, page 4 requires the permittee to perform monitoring and sample analysis according to procedures approved under 40 CFR 136, unless other procedures have been specified in the permit or approved by the Regional Administrator. While allowable per the proposed permit language and EPA regulation (40 CFR 122.41), no method(s) other than those approved under 40 CFR 136 have been specified for PCB analysis in the proposed permit.

The WQS at 20.6.4.14 A. NMAC establish a list of sampling and analytical methods acceptable for use in regard to the WQS. Among other qualified methods, methods published by the EPA Office of Research and Development or Office of Water are acceptable (20.6.4.14.A.3 NMAC). In December 1999, EPA Office of Water published *Method 1668, Revision A: Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by HRG/HRMS* [EPA Publication Number EPA-821-R-00-002]. EPA states in Section 1.2 of the method:

This Method is for use in data gathering and monitoring associated with the Clean Water Act

40 CFR 136 approved methods do not provide the necessary sensitivity to identify exceedances of state water quality criteria for PCBs. Samples analyzed using the EPA Method 1668 Revision A are able to reliably measure actual concentrations that are less than the default 0.2 µg/L MQL, less than the wildlife habitat criterion for PCB and greater than the PCB human health criterion. NMED has information from its lab that at this time the actual MQL for the Method 1668 Revision A method is in the range of 2.64 to 33.3 pg/L (0.0000026 µg/L to 0.000033 µg/L), which is also less than the human health criterion.

NMED therefore requires as condition of this certification that the proposed permit specify that PCB analyses be conducted in accordance with EPA's published *Method 1668 Revision A* and that MQLs be determined in an appropriate manner with reporting instructions adequate to ensure protection of state numeric water quality criteria for PCBs as follows:

- Amend the Proposed Permit to require EPA Method 1668 Revision A: Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by HRGC/HRMS [EPA No EPA-821-R-00-002] as the analytical test protocol for all PCB analysis for purposes of this permit.
- Amend Part II, Appendix A – Minimum Quantification Levels by striking the PCB 0.2 µg/L MQL and substituting clarification that the permittee shall determine a "Discharge Specific Quantification Level" according to the EPA Region 6 policy (i.e., following the 40 CFR 136 Appendix B to determine the minimum detection level (MDL) and that the MQL = 3.3 X MDL).

Comments That Are Not Conditions Of Certification

Comment #1 There is data from the NMED/DOE Oversight Bureau that suggests that over bank sediments along the Rio Grande in the vicinity of the Buckman Direct Diversion (BDD) contain plutonium - 239, cesium - 137, and americium - 241 above established background levels that originate from historic storm water flows out of Los Alamos Canyon. The potential remains that during heavy snowmelt or storm water runoff from Los Alamos Canyon that levels of these radionuclides may be present in the Rio Grande flows near the BDD. In order to assess the possible entrainment, concentration and mobilization of contaminated sediments at the BDD, NMED suggests that EPA include monitoring and reporting requirements for isotopic Plutonium (238, 239), Cesium – 137, and Americium – 241. NMED suggests that the frequency and location of sampling for these pollutants be the same as those for other toxics as described in the Fact Sheet, Part VIII.D.4 (c)(3) and the Proposed Permit Part I.A.

Comment #2 Fact Sheet, Part VIII.D.4 (c)(3), page 8, 1st paragraph, 2nd sentence states,

Therefore, EPA has established monitoring requirements for pollutants with numeric criteria that have been adopted to protect domestic water supply uses, as listed in the NM WQS. These parameters include...

For clarity, NMED notes that, while the NM WQS does include numeric criteria for all of the parameters listed, and agrees with EPA’s inclusion of monitoring requirements for all of these pollutants, not all of these pollutants have numeric criteria adopted to protect domestic water supply uses. These include:

<u>Pollutant</u>	<u>Designated Use(s)</u>
Aluminum, dissolved	irrigation, aquatic life (acute & chronic)
Boron, dissolved	irrigation, livestock watering
Cobalt, dissolved	irrigation, livestock watering
Molybdenum, dissolved	irrigation
Silver, dissolved	aquatic life (acute)
Vanadium, dissolved	irrigation, livestock watering
Nitrite + Nitrate	livestock watering

The rest of the parameters listed do indeed have numeric criteria adopted to protect domestic water supply uses, as well as other uses in some cases.

Comment #3 Fact Sheet, Part VIII.D.4 (d)(3), page 11, footnote (*1) lists the NPDES Permit No. as NM0030821. The correct NPDES Permit number is NM0030848.

Comment #4 Proposed Permit, Part I.A, page 7, footnote *14 does not appear applicable to this permit. NMED suggests that EPA remove this footnote as well as the references to this footnote included in the Whole Effluent Toxicity Testing monitoring requirements table.

Comment #5 Proposed Permit, Part II.D.1, page 2 is entitled “Reporting Turbidity Measurements at Instream Sample Points 01U and 01B.” NMED believes that EPA intended to say “...Instream Sample Points 01U and 01D.”

Comment #6 Proposed Permit, Part II.D.4 (a), (b), (c) and (d), pages 2 and 3, in the 2nd paragraph of each subsection refers to Part II E.2 (a), Part II E.2 (a), Part II E.2 (b) and Part II E.2 (b) respectively. NMED believes that EPA intended to say “Part II D.2 (a), Part II D.2 (a), Part II D.2 (b) and Part II D.2 (b)” respectively.

