NPDES PERMIT NO. NM0030848
RESPONSE TO COMMENTS

RECEIVED ON THE SUBJECT DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINAITON SYSTEM (NPDES) PREMIT IN ACCORDANCE WITH REGULATIONS LISTED AT 40CFR124.17

APPLICANT: City of Santa Fe
Buckman Direct Diversion
801 West San Mateo
Santa Fe, NM 87505

ISSUING OFFICE: U. S. Environmental Protection Agency
Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

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PERMIT ACTION: Proposed first time issuance of the permit.

DATE PREPARED: August 1, 2008

Unless otherwise stated, citations to 40CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations, revised as of February 20, 2008.

SUBSTANTIAL CHANGES FROM DRAFT PERMIT

Change 1:

Based on NMED conditions of certification, the permit has been changed 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 (footnote *14, Part I.A of the permit). The PCB Minimum Quantification Level (MQL) has been changed to MQL = 3.3 x MDL as determined according to EPA Region 6 MQL policy.

Change 2:

Based on comment from NMED and other commenters, monitoring requirements for Plutonium (238, 239) and Americium-241 have been added to Part I.A of the permit.

Change 3:

Based on a request from the permittee the permit has been modified to allow the permittee to report flow data from USGS gauging station USGS 08313000 "Rio Grande at Otowi Bridge, NM".

Change 4:

As a point of clarification in response to comments submitted the permit has been modified to state that turbidity measurements will be required on a daily basis on the days when the river diversion is operating.

STATE CERTIFICATION

Letter from Marcy Leavitt, Chief, New Mexico Environment Department (NMED) to Miguel I. Flores (EPA), dated 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:

Criterion Category	Numeric Criterion
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 Buckman Direct Diversion (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 PCBs (*Federal Register* Volume 73, No. 45, March 6, 2008 page 12055):

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 effect. 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 environments, 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 the 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 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 x MDL.

Thus it is possible, within the context of the existing procedure, to establish a more appropriate case-by-case MQL approach to the 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 sampling 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 RECEIVED ON DRAFT PERMIT

Testimony from Joni Arends (Concerned Citizens for Nuclear Safety) given at the Public Hearing for the Buckman Direct Diversion NPDES Permit No. NM0030848 on January 28, 2008.

Testimony from Mike Sanderson given at the Public Hearing for the Buckman Direct Diversion NPDES Permit No. NM0030848 on January 28, 2008.

Testimony from Shannyn Sollitt (Los Alamos Peace Project) given at the Public Hearing for the Buckman Direct Diversion NPDES Permit No. NM0030848 on January 28, 2008.

Testimony from Rick Carpenter (City of Santa Fe) given at the Public Hearing for the Buckman Direct Diversion NPDES Permit No. NM0030848 on January 28, 2008.

Testimony from Douglas Sayre (Santa Fe County) given at the Public Hearing for the Buckman Direct Diversion NPDES Permit No. NM0030848 on January 28, 2008.

Testimony from Elana Sue St. Pierre given at the Public Hearing for the Buckman Direct Diversion NPDES Permit No. NM0030848 on January 28, 2008.

Testimony from Virginia J. Miller given at the Public Hearing for the Buckman Direct Diversion NPDES Permit No. NM0030848 on January 28, 2008.

Testimony from Don Kimball (Peace and Justice for Animals) given at the Public Hearing for the Buckman Direct Diversion NPDES Permit No. NM0030848 on January 28, 2008.

Testimony from Patrick Malone given at the Public Hearing for the Buckman Direct Diversion NPDES Permit No. NM0030848 on January 28, 2008.

Testimony from Maurice Weisberg (Physicians for Social Responsibility) given at the Public Hearing for the Buckman Direct Diversion NPDES Permit No. NM0030848 on January 28, 2008.

Letter from Shannyn Sollitt to Diane Smith (EPA), dated January 28, 2008.

Letter from Marcy Leavitt, Chief, New Mexico Environment Department (NMED) to Miguel I. Flores (EPA), dated March 20, 2008.

Email correspondence from Ishwari Sollohub to Diane Smith (EPA), dated January 27, 2008.

Email correspondence from Don Kimball to Diane Smith (EPA), dated January 28, 2007.

Letter (facsimile) from Maurice A. Weisberg, M.D. to the EPA Hearing Officer, dated February 23, 2008

Email correspondence from Jan Lustig to Diane Smith (EPA), dated February 6, 2008.

Email correspondence from Penelope McMullen to Diane Smith (EPA), dated February 7, 2008.

Email correspondence from Nancy King to Diane Smith (EPA), dated February 8, 2008.

Email correspondence from Malissa Haslam to Diane Smith (EPA), dated February 8, 2008.

Email correspondence from Jeffrey Birnbaum to Diane Smith (EPA), dated February 11, 2008.

Email correspondence from Marjorie Williams to Diane Smith (EPA), dated February 11, 2008.

Email correspondence from Betsy Millard to Diane Smith (EPA), dated February 11, 2008.

Email correspondence from Jean Nichols to Diane Smith (EPA), dated February 11, 2008

Email correspondence from Brenda Blume to Diane Smith (EPA), dated February 11, 2008.

Email correspondence from Joni Arends (Concerned Citizens for Nuclear Safety) to Willie Lane (EPA) and Diane Smith (EPA), dated February 11, 2008.

Email correspondence from Rebecca Procter to Diane Smith (EPA), dated February 11, 2008.

Email correspondence from Rachel Conn (Amigos Bravos) to Willie Lane (EPA) and Diane Smith (EPA), dated February 11, 2008.

Email correspondence from Mark Sardella (Local Energy) to Diane Smith (EPA), dated February 11, 2008.

Letter from Rick Carpenter, Project Manager, Buckman Direct Diversion Project, City of Santa Fe to Diane Smith (EPA), dated February 11, 2008.

Email correspondence from Elizabeth Corder to Diane Smith (EPA), dated February 11, 2008.

Email correspondence from Pam Gilchrist to Diane Smith (EPA), dated February 11, 2008.

Email correspondence from Sasha Pyle to Diane Smith (EPA), dated February 11, 2008.

Email correspondence from Lynne Cabral to Diane Smith (EPA), dated February 11, 2008.

Email correspondence from Malissa Haslam to Diane Smith (EPA), dated February 11, 2008.

Email correspondence from Susan Rundstrom to Diane Smith (EPA), dated February 11, 2008.

Email correspondence from Patricia Green to Diane Smith (EPA), dated February 11, 2008.

Email correspondence from Fiona Sinclair to Diane Smith (EPA), dated February 11, 2008.

Email correspondence from Virginia Miller to Diane Smith (EPA), dated February 11, 2008.

Email correspondence from Jeanne Green to Diane Smith (EPA), dated February 12, 2008.

Email correspondence from Zi Pinsley to Diane Smith (EPA), dated February 12, 2008.

Email correspondence from Maury Brooks to Diane Smith (EPA), dated February 13, 2008.

Email correspondence from Yevgeniya Novgorodskaya to Diane Smith (EPA), dated February 15, 2008.

Email correspondence from Giselle Piburn to Diane Smith (EPA), dated February 19, 2008.

Email correspondence from Thomas B. French to Diane Smith (EPA), dated February 22, 2008.

Email correspondence from Thomas French to Diane Smith (EPA), dated February 25, 2008.

Facsimile from Elana Sue St. Pierre to Diane Smith (EPA), dated February 4, 2008.

Letter from Bette A. Johnson to Diane Smith (EPA), dated March 4, 2008.

Email correspondence from Carole Tashel to Diane Smith (EPA), dated March 4, 2008.

Letter from Rick Carpenter, Project Manager, Buckman Direct Diversion Project, City of Santa Fe to Diane Smith (EPA) forwarded by Norman Gaume, dated March 11, 2008.

Letter from Joni Arends (Concerned Citizens for Nuclear Safety) and Brian Shield & Rachel Conn (Amigos Bravos) to Diane Smith (EPA), dated March 12, 2008.

RESPONSE TO COMMENTS

Comment 1 (NMED and others): NMED and other commenters noted that 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. 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 Plan Part I.A.

Response 1: Based on the strong response from the public and NMED, as well as the proposed addition of criteria for plutonium and americium in the 2008 Triennial Review of the State water quality standards [Proposed Amendments to the State of New Mexico Standards for Interstate and Intrastate Surface Waters (August 11, 2008)], EPA has determined that inclusion of monitoring and reporting requirements for plutonium-238, -239, and americium-241 in BDD's permit is appropriate. However, EPA is not including a monitoring and reporting requirement for cesium-137, due to its absence from the proposed State water quality standards and near absence from public comments made on the draft BDD permit.

Other radionuclides, such as strontium, uranium, and tritium were included in the draft permit in order to ensure the protection of Domestic Water Supply and Livestock Water designated uses as described in the State of New Mexico Standards for Interstate and Intrastate Surface Waters (as amended through August 1, 2007) and the Fact Sheet for NPDES Permit No. NM0030848. EPA feels that the addition of monitoring requirements for plutonium-238,-239, and americium-241 will not only be beneficial in determining the influence of the BDD's activities on the water

quality of the Rio Grande, but will also provide data on the presence of the aforementioned pollutants relative to any criterion that may be established. The final permit has been revised to include monitoring and reporting requirements for plutonium-238, -239, and americium-241 at the same frequency and location of sampling as those for other toxics described in the Proposed Permit Plan Part I.A.

The United State Supreme Court in Train vs. Colorado Public Interest Research Group, Inc., 426 U.S. 1, 96 S.Ct.1938 (1976), found that the term "pollutant" under the Clean Water Act (CWA or "the Act") does not include source, by-product, and special nuclear materials covered by the Atomic Energy Act, and that consequently, the Administrator of EPA does not have the authority to regulate the discharge of such materials under the Act. (Under the CWA, only "pollutants" are subject to EPA "regulation." In Train, the Supreme Court quoted excerpts from the legislative history of the CWA in which Senators discussed defining the term "pollutant" in terms of "the need to define what materials are 'subject to control requirements'" under the Act. (Id. at 1944).

However, it is not necessary to address in this proceeding the intricacies of which materials under what circumstances are regulated under the Atomic Energy Act and thus not subject to EPA regulation under the Clean Water Act. The commenter here has not asked EPA to "regulate the discharge" of plutonium-238, -239, and americium-241, i.e., through the imposition of control requirements such as technology-based effluent limitations. Rather, the commenter has requested only that EPA include monitoring and reporting requirements for these materials based on data showing the presence of these materials in sediment near the BDD.

EPA has broad authority under Sections 308(a) and 402(a)(1) of the CWA to require monitoring and reporting conditions as necessary to carry out the objectives of the Act. Both the courts and the Environmental Appeals Board have confirmed the broad reach of this authority under a wide range of factual circumstances. See United States v. Tivian Laboratories, Inc. 589 F. 2nd 49 (1st Cir. 1978). See also In re City of Port St. Joe & Florida Coast Paper Co., 7 E.A.D. 275 (EAB 1997); In re Liquid Air Puerto Rico Corp., 5 E.A.D. 247 (EAB 1994); In re Town of Ashland Wastewater Treatment Facility, 9 E.A.D. 661 (EAB 2001).

In Train, the Supreme Court differentiated between EPA's authority to regulate AEA-regulated materials and EPA's broader responsibilities under the Act. In a footnote to its decision, the Court noted that the fact that EPA is precluded from imposing control requirements on materials subject to regulation under the Atomic Energy Act does not mean that EPA "has no role to play in protecting the environment from excessive radiation attributable to AEA-regulated materials." Id. at Footnote 20. Noting that EPA was established by Reorganization Plan No. 3 of 1970, the Court explains that "[a]mong the functions transferred to the EPA under that plan were 'establishing generally applicable environmental standards for the protection of the general environment from radioactive materials. As used herein, standards mean limits on radiation exposures or levels, or concentrations or quantities of radioactive material, in the general environment outside the boundaries of locations under the control of persons possessing or using radioactive material.'" Id at Footnote 20, quoting Reorganization Plan No. 3 of 1970, Section 2(a)(6), 84 Stat. 2088, 5 U.S.C. App., p. 610. The Court goes on to quote EPA's explanation of

the resultant division of authority, as expressed in the Petitioner's brief, that although the Atomic Energy Commission was given exclusive authority to "prescribe the limitations applicable to discharges of licensed materials from particular sources which contribute to the total," EPA "was to set generally applicable radiation standards, limiting the total amount of permissible radiation in the environment from major categories of sources." Id. at Footnote 20.

Therefore, even if plutonium-238, -239, and americium-241 were determined, under the circumstances of this case, to be subject to regulation by the Atomic Energy Commission and not EPA, there is nothing in the CWA or the Train decision that precludes EPA from using its broad information gathering authority to require a point source to monitor and report levels of these materials in its discharge in order to inform EPA as to the presence of potentially harmful levels of these materials in the receiving stream.

Comment 2 (NMED): 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 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:

Pollutant	Designated Use(s)
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.

Response 2: EPA concurs that while the above parameters were incorrectly listed as having "numeric criteria adopted to protect domestic water supply uses," the inclusion of these parameters was appropriate based on irrigation, aquatic life, and livestock watering uses. The comment has been noted in the administrative record and there will be no changes regarding the monitoring requirements for these parameters.

Comment 3 (NMED): 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.

Response 3: The typographical error has been corrected in the administrative record.

Comment 4 (NMED): 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 in the Whole Effluent Toxicity Testing monitoring requirements table.

Response 4: EPA concurs; Footnote 14 and its references have been removed from the permit.

Comment 5 (NMED): 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."

Response 5: EPA concurs; Part II.D.1, page 2 of the permit has been corrected to say "... Instream Sample Points 01U and 01D."

Comment 6 (NMED): 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 D.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.

Response 6: EPA concurs; incorrect references to Part II Section E have been corrected to Part II Section D.

Comment 7 (Rachel Conn and others): Several commenters requested an extension of time to comment on the draft permit due to the amount of public interest and new information that was recently released by the BDD Board.

Response 7: EPA granted a 30-day extension to the public comment period.

Comment 8 (Joni Arends and others): Multiple commenters asked why all the constituents are required to be "reported" instead of having an effluent limit.

Response 8: It is typical for the EPA to require a new facility to monitor and report pollutants, especially human health parameters and other toxics, during the first year of the first permit term. This requirement provides data that can be used to determine if a reasonable potential exists for the parameters to violate the New Mexico Water Quality Standards. If monitoring results demonstrate a reasonable potential to exceed water quality standards for any parameter subject to EPA's regulation and not currently regulated in the permit (i.e., through the imposition of effluent limitations), appropriate limits may be developed and included in the permit either through reopening of the permit or at permit reissuance. The current permit may be reopened and modified if new information is received that was not available at the time of permit issuance that would have justified the application of different permit conditions at the time of permit issuance, as stated in Page 1 of Part II, Section C of the proposed permit.

Comment 9 (Joni Arends): We urge EPA to evaluate the results of the upstream and downstream monitoring results before any proposed reissuance of the permit. In order to protect human health and the environment, the results must be reviewed upon receipt of the DMRs. Further, we request EPA require the City to post the DMR submittals on its website for public notification and review. We request that EPA require the City to provide a public notification system similar to that used by EPA for WIPP where the public is notified by email when new information, reports, public comment periods, etc. are posted to the site.

Response 9: BDD is required under the Permit to submit DMRs monthly and EPA routinely reviews DMR data upon receipt of the DMRs to determine compliance with the terms of the Permit. If compliance problems are noted, appropriate action will be taken. In addition, the current permit may be reopened and modified if new information is received that was not available at the time of permit issuance that would have justified the application of different permit conditions at the time of permit issuance, as stated in Page 1 of Part II, Section C of the proposed permit. DMR data review is also an important step in the reissuance of an NPDES permit. The EPA uses this data to help determine future sampling frequencies, as well as the need for effluent limits, prior to reissuance.

Under 40 CFR 122.7 and Part III, Section 12 of the permit, all DMR data must be made available to the public. There is nothing in the CWA or federal NPDES regulations that requires the permittee to post DMRs on its website or to provide the public with notification of the posting of such information. However, DMR data for Major permittees is posted on EPA's website as part of EPA's Enforcement & Compliance History Online program (ECHO). In addition, information regarding the BDD NPDES Permit, including DMRs, is available to the public through a Freedom of Information Act (FOIA) request. Please visit ECHO online at (http://www.epa.gov/echo) or the EPA Region 6 FOIA website (http://www.epa.gov/earth1r6/6md/foia/index.html) for more details.

Comment 10 (Rick Carpenter, City of Santa Fe): The applicants request that the proposed permit be revised to indicate that if four (4) quarterly Whole Effluent Toxicity (WET) tests during the first full year pass, then the monitoring frequency for both *Ceriodaphnia dubia* and *Pimephales promelas* be eliminated. There are two bases for this request. First, the discharge consists solely of Rio Grande water and sand. The same water and sand are in the river today and that support aquatic life (based on biological surveys completed for the EIS). Thus there is no toxicity to the indigenous species. Second, a year of quarterly monitoring for human health and water supply parameters (Part I, footnote *9) is considered to be sufficient to demonstrate the absence of these parameters. Thus, using the same reasoning, a year of WET testing should be adequate to demonstrate the lack of toxicity in the discharge.

Response 10: EPA includes WET monitoring in NPDES permits in order to evaluate the effects of synergism of effluent components. While the EPA agrees that the discharge consists of Rio Grande water and sediment, biomonitoring is included in the permit to help investigate the influence of the change in the concentration of materials in the receiving stream. Biomonitoring is also required to ensure compliance with numeric water quality standards for total ammonia. The WET monitoring schedule in the proposed permit is based on an update to the 1995

Implementation Guidance provide by NMED (see Fact Sheet, page 10) which is used for all NPDES permits issued in the State of New Mexico. Therefore, WET monitoring and frequency reduction considerations will remain in the permit as proposed.

Comment 11 (Maurice Weisberg): The loads of concentrated dangerous wastes should be carefully isolated from the Rio Grande Corridor, put into canisters and can be encapsulated either by vitrification or grouting. Dilution is not the solution and the BDD preference will only result in concentration of the contaminants as they move up the food chain from fish to birds, to wildlife and then humans and ending up in the fatty tissues and in many cases passing through the placenta.

Response 11: As required by the CWA, BDD's NPDES permit includes technology-based limits based on the best-professional judgement of the permit writer, plus where necessary, more stringent limits needed to meet State water quality standards. BDD's permit does not specify the use of a particular pollutant control technology. The CWA requires only that dischargers comply with the discharge limits established in their NPDES permits. With only very limited exceptions, the dischargers are free to meet those limits through the use of whichever technology they choose. However, EPA has included whole effluent biomonitoring in the proposed permit in order to address any toxicity that might occur due to the concentration of pollutants in the permittee's discharge. EPA believes that biomonitoring is the most direct measure of potential toxicity and that it incorporates both the effects of synergism of the effluent components and receiving stream water quality characteristics. If biomonitoring results demonstrate a reasonable potential to exceed water quality standards, appropriate limits may be developed and included in the permit either through reopening of the permit or at permit reissuance.

Comment 12 (Brenda Blume and others): Several commenters stated that a more complete description of the discharge was needed prior to the issuance of the NPDES permit before it could be considered safe or advisable. Requests for further research included the investigation of the water column and sediment for the major contaminants associated with LANL, including plutonium, PCBs, and radionuclides, as well as the influence of sediments, precipitates, and organic/inorganic solids that do not fill the interstices of the substrate that will be discharged on aquatic life and the physical/chemical properties of the river bed. Some commenters requested that these studies be conducted by an independent panel of scientists, agreed to by the City, the public and the regulators and that all data resulting from such testing would be made available to the public. Concern was also expressed regarding contaminants associated with personal care products, pharmaceuticals, medical contaminates, bromates from water treatment, and other potential threats to human health and other designated stream uses.

Response 12: EPA does not believe further investigation into the nature of the proposed discharge is necessary prior to issuance of the permit. The permit addresses, either through effluent limits or monitoring and reporting requirements, all parameters with approved State water quality standards [State of New Mexico Standards for Interstate and Intrastate Surface Water (as amended through August 1, 2007)] to ensure the protection of all designated stream uses for the affected Segment of the Rio Grande River (Rio Grande Waterbody Segment Code No. 20.6.4.114 of the Rio Grande Basin). While domestic water supply is not a designated use

of Segment 20.6.4.114 of the Rio Grande Basin, the EPA recognizes that the primary function of the BDD is to provide drinking water to the City of Santa Fe, Santa Fe County, and the Las Campanas residential development. Therefore, EPA has also established monitoring requirements for pollutants with numeric criteria that have been adopted to protect domestic water supply uses. Consistent with EPA Region 6 procedures if monitoring results demonstrate a reasonable potential to exceed water quality standards for any parameter subject to EPA's regulation and not currently regulated in the permit (i.e., through the imposition of effluent limitations), appropriate limits or actions may be developed and included in the permit either through reopening of the permit or at permit reissuance. In addition, the permit as finalized includes monitoring and reporting requirements for certain radionuclides not covered by State Water Quality Standards, as well as a requirement that the permittee conduct physical and biological assessments of the stream to evaluate the impact of the BDD discharge on aquatic species and streambed morphology. See also Response to Comments 1, 8, and 9.

Comment 13 (Zi Pinsley and others): If EPA issues the permit, it must require a five-year study of the proposed discharge. The study should reflect the seasonal changes in the Rio Grande, with monthly sampling over a five-year period of time. The study must assess the composition of the discharge, as well as sample the sediments using the most sensitive analytical methods for LANL contaminants. DOE must be required to pay for the additional sampling, analysis and reporting.

Response 13: EPA does not believe the recommended five-year study of the proposed discharge is necessary. As explained in detail elsewhere in this Response to Comments, EPA believes the proposed permit contains effluent limitations and monitoring and reporting requirements sufficient to ensure the discharge meets all federal and state requirements. In addition, EPA believes that quarterly sampling conducted over the course of the first year of the permit term will provide sufficient data to account for the influence of seasonal changes in the water quality of the Rio Grande. EPA would also like to note that the proposed permit does contain biomonitoring requirements for the entire term of the permit as explained in Responses to Comments 10 and 11. See also Responses to Comments 1, 9 and 12.

Comment 14 (Mark Sardella and others): Some commenters noted that an investigation of contaminants, such as plutonium, in the old river channel/slough has been initiated by the City, NMED, DOE, and LANL. They stated that the investigation should be completed, and the results should be made available for public review and comment prior to the issuance of the BDD NPDES permit. Some commenters also suggested that the EPA and the City of Santa Fe should require DOE/LANL to collect additional plutonium samples and conduct independent laboratory analysis, data review and publication.

Response 14: EPA does not believe it is necessary to wait for the results of any independent investigation of contaminants in the old river channel/slough prior to issuance of the permit or that it is appropriate to require DOE/LANL to collect additional plutonium samples and conduct independent laboratory analysis, data review and publication as part of this permit issuance process. As explained in detail elsewhere in this Response to Comments, EPA believes the proposed permit contains effluent limitations and monitoring and reporting requirements sufficient to ensure the discharge meets all federal and state requirements. In particular, the

permit as finalized includes monitoring and reporting requirements for radionuclides, such as strontium, uranium, and tritium, for which the State of New Mexico has numeric criteria designed to ensure the protection of Domestic Water Supply and Livestock Water designated uses, as well as monitoring and reporting requirements for certain radionuclides, such as plutonium, not covered by State Water Quality Standards. (see Responses to Comments 1, 9 and 12).

Comment 15 (Maurice Weisberg): The New Mexico Surface Water Quality Board reported in 2005 that aquatic life was being impaired by contaminates above acceptable limits in Rio Grande-Santa Fe. Probable causes of impairment are PCB and turbidity. Probable sources of impairment listed were contaminated sediments, and inappropriate waste disposal. This fact was not noted in NPDES permit fact sheet of October 2007.

Response 15: EPA agrees that in the "2006-2008 State of New Mexico Integrated List," the Rio Grande (Cochiti Reservoir to San Ildefonso bnd) segment of the Rio Grande River Basin is listed as "Not Supporting" the Marginal Coldwater Aquatic Life and Warmwater Aquatic Life designated uses. The probable causes of impairment are listed as turbidity and PCB in fish tissue. The probable sources of impairment are listed as atmospheric desposition – toxics, contaminated sediments, inappropriate waste disposal, natural sources, and unknown sources. This information was not noted in the Fact Sheet to the proposed permit because the "2006-2008 State of New Mexico Integrated List" was approved by EPA on January 18, 2008, after public notice of the proposed permit. However, EPA included a turbidity limit in the proposed permit in order to address the impairment of this segment of the Rio Grande. EPA also placed a monitoring requirement for PCBs in the proposed permit. Both the turbidity limit and the monitoring requirement for PCBs remain in the permit as finalized.

Comment 16 (Jeffrey Birnbaum and others): Several commenters stated that prior to NPDES permit issuance the issue of why black fungi passed through a water filtration system in a similar diversion project in Albuquerque needs to be resolved.

Response 16: Problems associated with the water filtration system of BDD's or any other drinking water system is outside the scope of this NPDES permit issuance process.

Comment 17 (Elana Sue St. Pierre): At the January 28, 2008, EIS meeting it was clearly stated that the proposed permit Section: Limitations and Monitoring Requirements did not include Americium 241, Neptunium 237, Plutonium 239-239-240, Cesium 137, Strontium 90, Hexavalent Chromium or Perchlorate. All of these deadly toxins will have to be monitored as identified and documented as threat to our region in the Final Draft 1999 and Draft 2006 LANL Site-Wide Environmental Impact Statement.

Response 17: EPA would like to note that several commenters referenced a "January 28, 2008, EIS meeting" or a "January 28, 2008, EIP meeting." EPA is not familiar with either meeting and to our knowledge, the only meeting conducted on January 28, 2008 regarding the BDD discharge was the Public Meeting/Public Hearing for Buckman Direct Diversion NPDES Permit No. NM0030848 at the Santa Fe Community College, Jemez Complex. The LANL Site-Wide

Environmental Impact Statement is outside the scope of this permit proceeding. However, as discussed in greater detail elsewhere in this Response to Comments, EPA has included monitoring and reporting requirements for plutonium-238, -239, and americium-24 in BDD's permit (See Response to Comment 1).

Comment 18 (Elana Sue St. Pierre): At the EIP meeting January 28, 2008, it was stated that the Buckman Diversion Plan was essential to provide the future water needs of Santa Fe. I do not feel this justifies the permit in its current form. I have not seen evidence that an Alternative Sustainable Long Term water plan has been seriously considered since the contamination site was found. Such alternatives may include further exploration and protection of existing aquifers, filtration of deep brackish water, state of the art effluent distillation, (like California has developed), gray water filtration, roof top catchments filtration systems, reservoir fortification and intensive conservation methods. Once the contamination sources are stopped, cleaned or contained, the diversion plan may become a safe plan but it is premature to permit actions that are not yet safely researched.

Response 18: It is not clear to the EPA what the commenter is referring to with the acronym "EIP" or with "the EIP meeting January 28, 2008" (See Response to Comment 17). However, the current NPDES permitting process for NPDES Permit Number NM0030848 is restricted specifically to the discharge of materials back to the Rio Grande River by the BDD. Whether drinking water source alternatives have been sufficiently examined is outside of the scope of this NPDES permitting process.

Comment 19 (Elana Sue St. Pierre): Current EPA standards for safe drinking water do not protect pregnant women or her fetus, infants, children, the sick or the aged. Although this permit falls under the jurisdiction of the Clean Water Act not the Safe Drinking Act it is time for a holistic unified approach between our government's protective agencies and acknowledge the effect this permit will have on down river drinking water.

Response 19: As noted by the commenter, this permit is being issued pursuant to the authority granted EPA for the discharge of pollutants under the CWA NPDES permitting program. The appropriateness of federal drinking water standards is outside the scope of this NPDES permitting process.

Comment 20 (Carole Tashel): Radioactive chemicals from LANL will go directly into Santa Fe's drinking water, through an inadequate filtering and diluting process. No amount of radioactive elements should enter our water, but if they must, then standards must protect more than just the 154 pound male.

Response 20: As noted in Response to Comment No. 19, this permit is being issued pursuant to the authority granted EPA for the discharge of pollutants under the CWA NPDES permitting program. The appropriateness of federal drinking water standards is outside the scope of this NPDES permitting process.

Comment 21 (Maurice Weisberg): This dumping is not just a single event but will be repeated endlessly for many decades and is both cumulative and synergistic with many contaminants reinforcing their effects on each other.

Response 21: EPA is aware of public concern regarding the possible cumulative and synergistic effects of the proposed discharge. EPA has included whole effluent biomonitoring in the permit in order to address any toxicity that might occur due to the concentration of pollutants in the permittee's discharge. EPA believes that biomonitoring is the most direct measure of potential toxicity and that it incorporates both the effects of synergism of the effluent components and receiving stream water quality characteristics. If biomonitoring results demonstrate a reasonable potential to exceed water quality standards, appropriate limits may be developed and included in the permit either through reopening of the permit or at permit reissuance.

Comment 22 (Elana Sue St. Pierre): The Santa Fe Community is a special risk due to our sole source aquifer designation under section 1424(e) of the Safe Drinking Water Act and the Clean Water Act should recognize our special threat due to our down river closeness to LANL. Denying this permit will support the need for further research and negotiations about clean up procedures that are just beginning between the City Council of Santa Fe, the BDD Director, Las Companas, and LANL. Denying this permit will also support New Mexico's River Ecosystem Restoration Initiative by preventing a re-contamination source.

Response 22: EPA is aware of public concern regarding the proximity of BDD's discharge to the LANL facility and that the primary function of the BDD is to provide drinking water to the City of Santa Fe, Santa Fe County, and the Las Campanas residential development. As noted elsewhere in this Response to Comments document, the permit addresses, either through effluent limits or monitoring and reporting requirements, all parameters with approved State water quality standards to ensure the protection of all designated stream uses for the affected Segment of the Rio Grande River. In addition, the permit includes monitoring requirements for pollutants with numeric criteria that have been adopted to protect domestic water supply use, as well as monitoring and reporting requirements for certain radionuclides not covered by State Water Quality Standards. However, this permitting action for NPDES Permit Number NM0030848 is specifically restricted to the discharge of materials back to the Rio Grande River by the BDD. Clean up procedures associated with LANL, as well as New Mexico's River Ecosystem Restoration Initiative, are outside the scope of this NPDES permitting action.

Comment 23 (Penny McMullen and others): Several commenters stated that there is good reason to suspect that LANL contaminants will be part of any "separated sediments" proposed to be discharged back into the Rio Grande from the proposed diversion project operations because the discharge will not only contain sand, but a mixture of sand, silt, and clay. The quantity of sand, sediments, silts, clays and water that will be part of the discharge, including possible LANL contaminants, as well as pharmaceuticals, endocrine disruptors, and other materials from upstream wastewater treatment plants, is unknown. If EPA goes forward with issuing the proposed permit, there must be a requirement that the City haul the discharge materials to the Caja del Rio landfill until a record of performance has been established for the properties of the sands, sediments, clays, silts and water proposed for discharge to the Rio Grande for a period of

five years. Then the public will have an opportunity to review the record and make comments for any renewal of the permit at that time.

Response 23: EPA believes that the current monitoring requirements are sufficient to establish the presence of pollutants in the Buckman discharge. If monitoring results demonstrate a reasonable potential to exceed water quality standards for any parameter subject to EPA's regulation and not currently regulated in the permit (i.e., through the imposition of effluent limitations), appropriate limits may be developed and included in the permit either through reopening of the permit or at permit reissuance. See Responses to Comments 1 and 12. The permit may be reopened and modified if new information is received that was not available at the time of permit issuance that would have justified the application of different permit conditions at the time of permit issuance (see Response to Comment 12). Furthermore, NPDES Permit Number NM0030848 is restricted to the specific discharge of materials directly back to the Rio Grande River. EPA does not have the authority under the NPDES permit program to regulate the disposal of materials in a landfill. As with all NPDES permits, the public will have the opportunity to review the permit and supporting information for the purpose of making comments during the permit renewal process.

Comment 24 (Penny McMullen and others): Will contaminated materials be allowed to be discharged back to the Rio Grande? Will the City be required to ship the contaminated materials to a low-level radioactive waste disposal facility, or if the levels are high enough, to ship the waste to WIPP?

Response 24: NPDES Permit No. NM0030848 only addresses the discharge of materials back into the Rio Grande by the BDD. The NPDES permit does not regulate disposal alternatives other than discharge to the Rio Grande, which is a Water of the United States. However, such disposal alternatives may be covered by other State and/or federal permitting requirements.

The permit requires monitoring of human health parameters and other toxics during the first year of discharge. The issued permit may be reopened and modified if new information is received that was not available at the time of permit issuance that would have justified the application of different permit conditions at the time of permit issuance (see Response to Comment 8). Therefore, the permit may be reopened and modified to include limitations if monitoring results show that a reasonable potential to exceed State water quality standards. The permittee will be subject to enforcement actions for any parameters that violate the prescribed limits of the permit.

Comment 25 (Malissa Haslam and others): The EIP does not consider that the "visible sand" that will be dumped along the Rio Grande River may be contaminated with "invisible concentrated radioactive toxins" trapped in and around the "visible sand" due to the extraction process. Once the sand is dumped the toxins may possibly migrate back into the food chain and drinking water of the surrounding areas all along the river. These invisible radioactive toxins may be deadly in nature for generations and have not been investigated at all.

Response 25: It is not clear to the EPA what the commenter is referring to with the acronym "EIP." However, as explained in detail elsewhere in this Response to Comments, EPA believes

the proposed permit contains effluent limitations and monitoring and reporting requirements sufficient to ensure the discharge meets all federal and state requirements. In particular, the permit as finalized includes monitoring and reporting requirements for radionuclides, such as strontium, uranium, and tritium, for which the State of New Mexico has numeric criteria designed to ensure the protection of Domestic Water Supply and Livestock Water designated uses, as well as monitoring and reporting requirements for certain radionuclides, such as plutonium, not covered by State Water Quality Standards. EPA has also included whole effluent biomonitoring in the proposed permit in order to address any toxicity that might occur due to the concentration of pollutants due to in the permittee's discharge. EPA believes that biomonitoring is the most direct measure of potential toxicity and that it incorporates both the effects of synergism of the effluent components and receiving stream water quality characteristics. See also Responses to Comments 1, 9, 10, 12 and 11.

Comment 26 (Maurice Weisberg): The New Mexico Surface Water Quality Board has a criterion that states that surface water shall be free of toxic pollutants that affect the propagation of fish or that are toxic to humans, livestock, wildlife, or that bioaccumulate. This segment of the Rio Grande contains contaminants that are persistent organic pollutants and listed by the United Nations Environmental Program as the "Dirty Dozen." Most of these are pesticides, but also include PCBs, dioxins, and furans, and or are carcinogens or endocrine disrupters.

Response 26: The proposed permit contains monitoring and reporting requirements for pollutants, including organics, pesticides, and PCBs, which have numeric criteria in the State of New Mexico Standards for Interstate and Intrastate Surface Water (as amended through August 1, 2007) in order to protect the designated uses of the Rio Grande Waterbody Segment Code No. 20.6.4.114 of the Rio Grande Basin. In addition, the permit includes monitoring requirements for pollutants with numeric criteria that have been adopted to protect domestic water supply use. If monitoring results demonstrate a reasonable potential to exceed water quality standards for any parameter subject to EPA's regulation and not currently regulated in the permit (i.e., through the imposition of effluent limitations), appropriate limits may be developed and included in the permit either through reopening of the permit or at permit reissuance.

Comment 27 (Elana Sue St. Pierre): The BDD board has just begun its process of negotiations with LANL concerning reach and clean up plans for a major contamination site with Plutonium and other unknown "legacy contaminants." The BDD's EIP was created and submitted in 2006 before the DOE found the possible contamination site in 2007 just up river from the construction site and discharge site. On Oct. 4, 2007 at a BDD board meeting, Chris Calvert, city counsellor asked James Bearzi (Bureau Chief, NMED Hazardous Waste Bureau) and Rick Carpenter (BDD Director) what could happen if this contamination site was washed out by a flooding rain. They both responded that it could create a potential radioactive crisis for our area. The public record of the meeting documents how unstable this area is. No crisis prevention plan has been created. The action this permit would allow could further de-stabilize an area that has been identified as potentially creating a radioactive crisis. Please protect us deny this permit.

Response 27: It is not clear to the EPA what the commenter is referring to with the acronym "EIP." However, EPA has included monitoring requirements for parameters, including

radionuclides and PCBs, to investigate the presence of pollutants associated with LANL storm water runoff in sediment discharged into the Rio Grande. This permitting action for NPDES Permit No. NM0030872 is specifically restricted to the discharge of materials back to the Rio Grande River by the BDD. Clean up negotiations between BDD and LANL regarding any possible contamination sites in the area and procedures for addressing the possible flooding of such sites are outside the scope of this NPDES permitting action.

Comment 28 (Virginia Miller): A commenter at the public hearing asked what will happen to the small colloidal particles and attached contaminants that are sent to the treatment plant? What will the treatment plant do with it and how will it be stored and what impact will it have?

Response 28: This issue is beyond the scope of this NPDES permitting action. NPDES Permit No. NM0030848 only addresses the discharge of materials back into the Rio Grande by the BDD.

Comment 29 (Rick Carpenter, City of Santa Fe): The applicants requested that the permit specify stream flow be measured by the U.S. Geological Survey (USGS) at gauging station USGS 08313000 "Rio Grande at Otowi Bridge, NM" as opposed to at a point "upstream of the diversion." Measuring stream flow near the diversion structure would require construction of a new gauging station. In addition to the expense of constructing and operating a gauging station in a river the size of the Rio Grande, this activity was not contemplated in the Environmental Impact Statement and Record of Decision for the BDD. Thus it would require a new environmental documentation under the National Environmental Policy Act (NEPA).

The USGS Otowi gauge is operated by the USGS in cooperation with the New Mexico Office of the State Engineer. It is subject to extraordinary scrutiny and quality control. The continued operation and maintenance of this gauge is assured as it is required to be equipped with an automatic water stage recorder as required under Article II of the Rio Grande Compact. Additionally, the permit to divert water from the Rio Grande issued to the City of Santa Fe and Santa Fe County by the Office of the State Engineer requires that determination of water availability for the diversion be made at Otowi gauge. Similarly, the Biological Assessment issued by the U. S. Fish and Wildlife Service for the project relies on the USGS Otowi gauge to determine allowable diversions by the BDD at low river flows.

Response 29: The EPA agrees that the USGS Otowi gauge would provide adequate flow data for this segment of the Rio Grande. The final permit has been revised to allow the permittee to report flow data from USGS gauging station USGS 08313000 "Rio Grande at Otowi Bridge, NM" as opposed to at a point upstream of the diversion.

Comment 30 (Rick Carpenter, City of Santa Fe): The proposed permit states that turbidity must be measured on a daily basis. Turbidity measurements will be taken on a daily basis on the days when the river diversion is operating. During periods when the diversion is not operating, there will be no discharge. As the paired turbidity measurements are intended to assess the impact of the discharge on river turbidity, there is no utility in measuring turbidity when there is no discharge.

Response 30: The permit requirements for turbidity are a net difference between the upstream section above the influence of the discharge and at the outfall, during periods of discharge. The final permit has been revised to state that turbidity measurements will be required on a daily basis on the days when the river diversion is operating.

Comment 31 (Rick Carpenter, City of Santa Fe): The proposed permit states that turbidity shall be tested by grab sample. The applicants request that the turbidity "sample type" be revised to allow for either a grab sample or an instream measurement of turbidity. Turbidity meters are available with probes that measure turbidity in the stream and those that require collecting a grab sample and placing it in a chamber of the turbidity meter. The equipment selection for the monitoring required for the NPDES permit must consider the safety of the sampling personnel. During high flows it may be difficult to collect grab samples from the portion of the river that correlates to the discharge location. Therefore it may be safer to deploy an instream probe to collect a grab sample.

Response 31: The final permit has been revised to state that the permittee may utilize an instream probe for the purpose of measuring turbidity. However, the same sample type must be used to measure both upstream and downstream turbidity.

Comment 32 (Rick Carpenter, City of Santa Fe): The applicants request that the permit specify that analysis of water and discharge samples for pH, settleable solids, and total suspended solids can be conducted by the operators in the in-house water quality laboratory. The water quality laboratory will use certified equipment and will meet the requirements of NPDES Permit Part III, Number 5.

Response 32: The NPDES permit does not prohibit the laboratory analysis of water quality parameters from being conducted in-house. Therefore, specific permission to perform in-house analysis is unnecessary. EPA notes that any methods or equipment used in the analysis of regulated parameters should be conducted in accordance with *Standard Methods*, 40 CFR Part 136, and NPDES Permit No. NM0030872.

Comment 33 (Rick Carpenter, City of Santa Fe): The applicants request that the requirement to submit monthly Discharge Monitoring Reports (DMR) be revised to quarterly DMRs. The permit requires monitoring and reporting in order to collect data on the discharge that will serve to inform subsequent permits or as a basis to reopen this permit. However, in the absence of limitations on the discharge, the reporting of data on a quarterly basis should be adequate to fulfill the data collection function of the permit. Additionally, there is a precedent for quarterly DMRs for the City of Santa Fe water system. Under NPDES Permit Number NM0030465 (Discharge Numbers 001 through 015) for purge water discharges, the reporting requirement was for quarterly DMRs. Although the purge water discharge NPDES permit is now closed, the applicants believe the basis for quarterly monitoring reports for water system components is similar enough to the BDD discharge to warrant the same reporting frequency.

Response 33: The EPA has determined that the Buckman Direct Diversion facility is a "major facility." Permittees with a major facility rating are required by EPA Region 6 to submit monthly DMRs.

Comment 34 (Joni Arends): EPA must require method 1668A for all PCB analysis.

Response 34: In response to a Certification requirement submitted to EPA under Section 401 of the CWA, the permit has been changed 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. (See Conditions of Certification Section above.)

Comment 35 (Joni Arends): Did the U. S. Fish and Wildlife Service provide comments?

Response 35: The U. S. Fish and Wildlife Service did not provide comments.

Comment 36 (Ishwari Sollohub and others): Multiple commenters noted that current regulations protect people, assuming that each individual is 150 pounds or more. One commenter added that DOE reported radionuclides associated with nuclear weapons manufacturing in the Buckman Wellfield. The neptunium levels exceeded the current standard of 15 pCi/L for drinking water. In order to protect public health and the environment, there is an effort to lower the standards for radionuclides in drinking water to 0.15 pCi/L based on new scientific evidence about the impacts to pregnant women and her fetus, infants and children. If this standard were in place, LANL contaminants would exceed this exposure level for americium and neptunium.

Response 36: This permit is being issued pursuant to the authority granted EPA under the CWA NPDES permitting program. The appropriateness of federal drinking water standards is outside the scope of this NPDES permitting process and BDD's discharge of effluent back into the Rio Grande River is not required to meet drinking water standards.

Comment 37 (Joni Arends and others): The proposed permit is based on BPJ based on an April 2006 application. There is new information about the transport of LANL contaminants. Therefore, we urge EPA to include sampling and analysis requirements for the radionuclides which DOE has reported in the Buckman Wellfield. DOE may argue, but under the NMED/LANL Consent Order DOE reports radionuclide data for all media.

Response 37: It is unclear to EPA which radionuclides the commenter is referring to. However based on available information, including NMED/DOE Oversight Bureau data, the permit as finalized includes monitoring and reporting requirements for certain radionuclides. See also Response to Comments 1 and 12.

Comment 38 (Joni Arends): The proposed permit states that turbidity samples, TSS and settleable solids will be evaluated "during reissuance of the permit." If EPA plans to issue the discharge permit, then we urge EPA to review the data quarterly before reissuance of the permit. The BDD is an experimental facility and must be closely monitored.

Response 38: The primary purpose of requiring BDD to collect the TSS and settleable solids samples is to further evaluate their relationship of these materials with turbidity in the Rio Grande River. The EPA feels that in the absence of federal effluent limitation guidelines, this is a reasonable approach to help determine appropriate limits for future terms of the BDD permit. EPA does not believe it is necessary to re-evaluate the TSS and settleable solids requirements quarterly throughout the first term of the permit. However, TSS and settleable solids sampling results will be submitted to EPA on monthly DMRs, and should these sampling results indicate a problem, appropriate action will be taken.

Comment 39 (Joni Arends): The permit must include detailed information about the consequences if the discharge is impacting the morphology of the river, such as reducing discharge and remediation activities.

Response 39: The stream bottom deposits study described on Page 4 of Part II, Section E of the permit is designed to evaluate the impact of the proposed discharge on streambed morphology and aquatic species. The permit requires the facility to perform the studies and submit results to the proper regulatory agencies. Any impact to the morphology of the river is not an enforceable aspect of the permit. However, the permit may be reopened and modified if new information is received that was not available at the time of permit issuance that would have justified the application of different permit conditions at the time of permit issuance, as stated in Page 1 of Part II, Section C of the proposed permit.

Comment 40 (Elana Sue St. Pierre): The BDD needs to develop an "early warning" system to turn off the diversion from the river if contamination from LANL becomes too great. They also need an emergency plan in place to deal with contamination if the early warning system fails.

Response 40: NPDES Permit No. NM0030848 only addresses the discharge of materials back into the Rio Grande by the BDD. The NPDES permit does not regulate the quality of the removed surface water or require the development of an "early warning" system and an emergency plan to deal with any possible contamination is the diverted water is outside the scope of this permitting process.

Comment 41(Penelope McMullen): The proposed permit does not address what will happen in the eventuality that radionuclides are found in the discharged materials.

Response 41: The permit includes monitoring requirements for those radionuclides, such as strontium and tritium, which are addressed in the State of New Mexico Standards for Interstate and Intrastate Surface Waters (as amended through August 1, 2007). If monitoring results in the demonstration of a reasonable potential to exceed water quality standards, limitations can be developed for these parameters (see Response to Comment 8).