NMED DOE OB generic (simplified) comments concerning the 260 outfall CMS Plan:

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Note: The following comments are considered extremely **DRAFT**, and should be interpreted with caution.

(1) A detailed west-to-east lithologic cross-section is needed. Section should show not only geologic and structural features but hydrologic features as well (e.g., perennial reaches, springs discharge points, other recharge points such as the 90's-Line Pond);

(2) Ground water encountered in the Bandelier Tuff holes may be not be periodic (e.g., leakage along the annulus or gravel pack to fractures or other voids that are or were not hydrologically connected to the saturate section);

(3) Visually illustrate the hydrochemical and physical characteristics of the springs, and if enough date exist, please show relationships within the alluvial systems and the surface waters (e.g., how does storm water impact the water quality of the perennial reach or the alluvial ground waters?);

(4) Make sure that all surface-water samples are analyzed using the methods prescribed by the Clean Water Act (40 CFR/136);

(5) Some refinement of the conceptual model is needed (discussion?);

(6) A more detailed interpretation or description of the affects of the different types of surface water is needed (e.g., does storm water from side drainages or tributaries mobilize contaminates from other PRSs?);

(7) The Br inventory study: is it worth the effort? (discussion?);

(8) Has the Br tracer been detected in surface water runoff or the Canon de Valle alluvial system?;

(9) In terms of contaminant transport, we recommend that the other hydrologic-active sources be incorporated into the connectivity or pathway determination section of the plan: 90's Line Pond, Steam Plan drainage alluvial system and any alluvial ground water in the southern drainage downstream from PRS 16-020;

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(10) Recharge associated with spring discharges from the Bandelier Tuff is assumed to be from what surface-water (perennial reach?) infiltration into the alluvium followed by seepage along lithologic contacts and/or fracture/fault zones located west of SR 501. Hence, these waters need to isotopically and hydrochemically characterized, and linked into the recharge section(s) of the plan.

(11) The different sampling designs are somewhat confusing;

(12) Make sure the purge- and sample-retrieval procedures/technics are consistent between each well (e.g., use ladder pumps in all wells);

(13) We recommend that the alluvial aquifer in Canon de Valle be isotopically characterized so that isotopic data collected in R-25 can be correlated;

(14) Storm-water sampling should be included in the plan (dissolved and solid phases);

(15) The lower section of Canon de Valle may contain alluvial ground water, which may warrant characterization;

(16) The lateral extent of saturation in Martin Spring Canyon needs to be determined;

(17) The presence of alluvial ground water in Fish Ladder Canyon needs to be determined;

(18) Aquifer characteristics (e.g., hydraulic conductivity) for the alluvium, weather Qbt3, and Qbt 3 need to be determined;

(19) Water balance: how many gaging stations will be needed, and what about surface water west of SR 501, etc.;

(20) Suggest adding tritium to recharge/residence portion of the plan;

(21) Any other environmental isotopes which might supplement the ^{18}O and deuterium data (e.g., ^{15}N, $^{87}Sr/^{86}Sr$ ratios, ^{11}B or $^{11}B/^{10}B$ ratios)?; and

(22) Formal comments will be submitted to DOE within several weeks.