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CERTIFIED MAIL – RETURN RECEIPT REQUESTED

October 14, 2015

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**RE: CERTIFICATES OF COMPLETION
SEVENTEEN SOLID WASTE MANAGEMENT UNITS AND EIGHT AREAS OF
CONCERN AT TECHNICAL AREA 35
MIDDLE MORTANDAD/TEN SITE AGGREGATE AREA
EPA ID #NM0890010515
HWB-LANL-11-068**

Dear Messrs. Hintze and Brandt:

The New Mexico Environment Department (NMED) has received the United States Department of Energy (DOE) and the Los Alamos National Security L.L.C.'s (LANS) (collectively, the Permittees) *Request for Certificates of Completion for Twenty-Seven Solid Waste Management Units and Ten Areas of Concern in the Middle Mortandad/Ten Site Aggregate Area*, dated August 31, 2011 and referenced by EP2011-0297.

Several solid waste management units (SWMUs) and areas of concern (AOC) were recommended for corrective action complete in the *Investigation Report for the Middle Mortandad/Ten Site Aggregate Area, Revision 2* (Report), dated February 2008 (LA-UR-08-0336/EP2008-0035). NMED issued an Approval with Direction (AWD) for the Report on April 1, 2008. To date, NMED has issued certificates of completion for ten solid waste management units (SWMUs) and two areas of concern (AOCs).

NMED hereby issues certificates of completion for the following twenty-five sites pursuant to Section VII.E.6.b of the Consent Order.

SWMU 35-003(h) is the site of a former exchange concrete retention tank. This tank was constructed in 1961 and added as a component of the waste treatment plant (WWTP). The tank had dimensions of 8 ft x 12 ft x 10 ft deep and was connected to buildings TA-35-41 and TA-35-10 by 4-in diameter stainless steel underground pipes. The retention tank and associated piping was removed in February 1985. The tank and excavated soil were screened for radioactive contamination during the removal. No detection of radionuclides was documented. The site was included in the investigation of CU 35-003(a)-99 that included components of the former WWTP. Investigations conducted during 1995, 1996, 1997, and 2004-2005 indicate that there are no potential unacceptable risks or doses from the residual contamination for the industrial scenario. However, under the residential land use scenarios, the site poses an unacceptable risk to human health. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site. The site use must be restricted to industrial activities.

SWMU 35-003(p) is the former site of the Air Filter Building, TA-35-7. Radioactive air was filtered in this building and cleaning filters were washed by tap water and/or long-decayed wastewater from the tank farms. This long-decayed wastewater was contaminated with strontium-89 and strontium-90. Build-up of strontium in the air filters became a problem and required numerous washings, which produced more radioactive wastewater. The large volumes of water overwhelmed the storage capacity of the system and led to spills, overflows, and other unplanned releases to Pratt Canyon. The Air Filter Building underwent D&D first in 1980, and again in 1996. The building and associated piping was removed in 1996. The site was included in the investigation of CU 35-003(a)-99 that also included components of the former WWTP. Investigations conducted during 1995, 1996, 1997, and 2004-2005 indicate that there are no potential unacceptable risks or doses from the residual contamination for the industrial land use scenario. However, under the residential land use scenario, the site poses an unacceptable risk to human health. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site. The site use must be restricted to industrial activities.

AOC 35-003(r) is the site of a canyon disposal area for liquid sludge effluent associated with the former WWTP. The AOC is located in Pratt Canyon and extends from eastern edge of Ten Site Mesa to the confluence of Pratt and Ten Site Canyons. Pratt Canyon is contaminated with radionuclides. The WWTP that released the effluent ceased operation in 1963. The site was included in the investigation of CU 35-003(d)-00. Investigations conducted during 1995, 1997, 1998, 2005, and 2007 indicate that there are no potential unacceptable risks or doses from the residual contamination for the recreational land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site. The site use must be restricted to recreational activities.

SWMU 35-004(a) is made up of outdoor storage areas previously used to store drums of oil and drums containing organic chemicals. These areas are located south and east of building TA-35-25. Stained soil was observed at the site during a 1988 reconnaissance. In 1995, contaminated soil was removed from the storage area. Investigations conducted during 2004 indicate that there

are no potential unacceptable risks or doses from the residual contamination for the residential land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 35-004(h) is an area, near the northeast corner of building TA-35-7, which was formerly used to store containers of oil, capacitors, and organic chemicals like freon. The area is no longer used as a storage area and the date of closure is not documented. The disposition of the containers is not documented. Stained soil was observed at the site during a 1988 reconnaissance. Building TA-35-7 underwent first D&D in 1980 and a second D&D in 1996 at which time the building and associated piping were removed. Investigations conducted during 2005 indicate that there are no potential unacceptable risks or doses from the residual contamination for the residential land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 35-008 is a former canyon-side disposal area for debris, which includes scrap metal and piping, paint cans, 55-gal drums, and miscellaneous building materials. It is located along the rim of the north-facing slope of Mortandad Canyon. The debris extends from the canyon rim to the canyon floor. No releases of hazardous materials have been documented from this disposal area. The site was included in the investigation of CU 35-008-00. Investigations conducted during 1995, 1997, and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the residential land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 35-009(a) is a septic system that operated from 1951 to 1975. The septic system includes a 1500-gallon septic tank, dosing chamber, and a distribution box. These structures were abandoned in place when new sanitary sewer lines were routed to sewage lagoons located east of TA-35 in Ten Site Canyon. The septic system discharged to drain fields on the south-facing slope of Ten Site canyon. The septic system received sanitary wastes and possibly industrial and radiological wastes from building TA-35-2. Specific waste stream information is not available. The site was cleaned up during a voluntary corrective action (VCA) reported in September 1996. The VCA included removal and disposal of the tank contents and filling the tank with concrete. Investigations conducted during 1996, 1997, and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the industrial land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site. The site use must be restricted to industrial activities.

SWMU 35-009(d) is an abandoned 1600-gal septic tank and associated leach field. The tank is located at the northeast corner of Ten Site Mesa, and the leach field extends from the tank towards the east. The leach field covers an area of approximately 1800 ft² and consists of fine- to coarse-grained sandstone and cobble filter bed material. The septic system served TA-35 from 1966 to 1990. It handled sanitary waste and possibly industrial waste including radionuclides from building TA-35-27 and other laboratory buildings. During a 1996 VCA, the tank was pumped out, filled with concrete. No releases of hazardous materials are documented

for the site. Investigations conducted during 1996 and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the residential land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

AOC 35-010(e) is the NPDES permitted outfall EPA-SSS-10S from the sand filter beds that discharged into Ten Site Canyon. A depth-recording gauge station is located at the outfall that measured the effluent levels. A rock dissipater apron is present at the discharge point. Flow records of the NPDES outfall were used to estimate how much effluent was discharged during a significant portion of the life of sewage lagoons and filter beds. The average flow rate was approximately 45,000 gallons per day (gpd). The planned capacity of the facility was 12,000 gpd. The site was included in the investigations of CU 35-010(a)-99. Investigations conducted during 1995, 1997, and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the residential land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 35-014(e) is a dielectric oil spill that was bulldozed off the mesa top. The oil spill occurred when a forklift punctured an aboveground oil storage tank. The storage tank was removed in 1992. The site was included in the investigation of CU 35-008-00. Investigations conducted during 1995, 1997, and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the residential land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 35-014(g) is the site of a former oil spill on concrete adjacent to an asphalt-paved catchment basin located at the northeast corner of building TA-35-207. The catchment basin directs storm water flow to AOC 35-016(n), a corrugated metal pipe outfall and daylight drainage channel. A small oil stain was visible on the concrete; however, no obvious oil staining was apparent in the catchment basin or the outfall. The origin and the date of the spill are not known. Currently there are no visible signs of spill, as it was reportedly cleaned up in the late 1980s. The site was included in the investigation of CU 35-014(g)-00. Investigations conducted during 1995, 1998, and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the residential land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

AOC 35-014(g3) is an oil stained area resulting from a major oil spill that occurred near the former tank farm (SWMU 35-015(a)) on the west side of TA-35-86. The amount of oil that was released is not known, but the source of the spill was reportedly an oil tank truck. The spill flowed southward through a culvert under the road on the south side of TA-35-86, across the parking lot west of TA-35-207, and south through a natural drainage pathway into Ten Site Canyon. The spill occurred prior to May 9, 1984, the date of documentation photographs. The path of the spill was clearly visible in 1986 aerial photograph. The stained area was also observed in 1991. At that time, all vegetation in the path of the spill was dead and the area still

smelled strongly of oil. The tank farm underwent D&D in 1988/1989. Investigations conducted during 1995 and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the recreational land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site. The site use must be restricted to recreational activities.

SWMU 35-016(a) is an inactive outfall that was established in 1958 to discharge noncontact cooling water from TA-35-34. The outfall discharged into Ten Site Canyon. The SWMU included an approximately 70-ft-long drainline of undocumented construction, between TA-35-34 and the outfall. The outfall was included on NPDES Permit No. 04A089 until 1985 when it was eliminated from the permit. The volume of cooling water discharged through the outfall is not documented. The site was included in the investigation of CU 35-016(a)-00. Investigations conducted during 1996 and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the residential land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

AOC 35-016(b) is an inactive outfall, established in 1977, which discharged photographic processing effluents and storm water from roof drains associated with building TA-35-87. The outfall was permitted as NPDES outfall No. 06A132. The effluent discharge volume was limited to 3000 gal/day, released to Ten Site Canyon. Formerly photographic fluids were processed through a silver and cyanide recovery process before being released. The photographic laboratory waste drains that discharged to this outfall were either plugged or rerouted to the sanitary sewer system. Investigations conducted during 1995, 1997, and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the residential land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 35-016(c) consists of two inactive outfalls established in 1964 to discharge noncontact cooling water from warehouse TA-35-67. The outfalls were operated under former NPDES Permit No. 04A088 and Permit No. 04A012. The two outfalls were combined prior to 1985 under Permit No. 04A012 and deactivated in 1987. The site was included in the investigation of CU 35-016(c)-00. Investigations conducted during 1996 and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the recreational land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site. The site use must be restricted to recreational activities.

SWMU 35-016(d) is an inactive outfall that was constructed in 1962 to discharge noncontact cooling water from the Reactor Components Development Building, TA-35-46. This outfall was listed as active on NPDES Permit No. 04A087 in 1985. The outfall became inactive on April 10, 1987. The site was included in the investigation of CU 35-016(c)-00. Investigations conducted during 1996 and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the recreational land use scenario. The results of the ecological risk-

screening assessment indicate no potential unacceptable risk to ecological receptors at the site. The site use must be restricted to recreational activities.

AOC 35-016(e) is an inactive outfall, established in 1977, which discharged noncontact cooling water from building TA-35-85. This outfall was deleted from NPDES Permit No. 04A090 in April 1987. The outfall is located north of TA-35-85 on the rim of Mortandad Canyon and discharged to the steep slope. The volume of water released is not documented, but the erosion that has taken place below the outfall suggests that significant amounts of water were released. The investigations for this site were conducted with the investigation of CU 35-008-00. Investigations conducted during 1995, 1997, and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the residential land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

AOC 35-016(f) is an active storm drain located north of TA-35-85. The outfall consists of corrugated metal pipe 18 in. in diameter that discharges into small channel cut into backfill material on the south slope of Mortandad Canyon. Documented releases, consisting of oil spills, have occurred near the source area for the storm drain. The volume of spills is not documented. Soil samples from the stained areas contained detectable concentrations of PCBs. Investigations conducted during 1995 and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the residential land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 35-016(k) is the site of an inactive outfall that discharged noncontact cooling water from the Gas Laser Building, TA-35-29. The outfall was included on NPDES Permit No. 04A116 and was operational from 1961 to 1987. The outfall discharges into a steep channel lined with riprap that drains into Pratt Canyon. The site was included in the investigation of CU 35-016(k)-00. Investigations conducted during 1994, 1997, 2004, 2005, and 2007 indicate that there are no potential unacceptable risks or doses from the residual contamination for the recreational land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site. The site use must be restricted to recreational activities.

AOC 35-016(l) is the site of surface discharge channels. The channels were established in 1961 to discharge rainwater runoff from TA-35-29 and water leaks from an ultraviolet water sterilizer in TA-35-29. Stained areas from past dielectric oil spills are present in the source areas for these channels. Radiation data collected from the concrete catch basin for these drains was at levels 50% greater than background gamma radiation readings during 1988 site visit. These drainage channels discharge to the same riprap-lined channel as SWMU 35-016(k). The site was included in the investigation of CU 35-016(k)-00. Investigations conducted during 1994, 1997, 2004, 2005, and 2007 indicate that there are no potential unacceptable risks or doses from the residual contamination for the recreational land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site. The site use must be restricted to recreational activities.

SWMU 35-016(m) is an inactive noncontact cooling tower outfall. The outfall was included on NPDES Permit No. 03A039 and was intended for discharging treated cooling tower blowdown from two planned reactors in building TA-35-33. The reactors were never installed, the cooling tower never operated, and the outfall never served its intended purpose; instead it discharged storm water runoff from parking areas at the east end of TA-35 mesa top. Investigations conducted during 1994 and 2005 indicate that there are no potential unacceptable risks or doses from the residual contamination for the recreational and residential land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

AOC 35-016(n) is comprised of a 10 inch diameter corrugated metal pipe outfall, and natural drainage channel installed around 1997 to receive storm water runoff from the roof and paved area south of TA-35-86, and a grassy slope adjacent to building TA-35-207. The source of the outfall is a drainage channel that leads to asphalt-paved catchment basin. The outfall receives flow from the catchment basin via an intake grate. The site was included in the investigation of CU 35-014(g)-00. Investigations conducted during 1995, 1998, and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the residential land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 35-016(o) consists of four distinct and active storm drains established in 1951 to handle storm water runoff from TA-35-02. This SWMU also possibly handled TA-35-02 floor drain effluent from rooms A-10, A-13, and A-22. These four outfalls comprising SWMU 35-016(o) are located on the eastern side of the mesa, on the south slope of Mortandad Canyon, approximately 20 ft below the mesa edge. The outfalls consist of cast-iron drainpipes. No documented releases of hazardous materials have occurred at these outfalls. Investigations conducted during 1997, 2004, and 2007 indicate that there are no potential unacceptable risks or doses from the residual contamination for the recreational land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site. The site use must be restricted to recreational activities.

SWMU 35-016(p) is an unpermitted and active outfall established in 1968 to discharge noncontact cooling water condensate from TA-35-27. A separate reference states that this outfall discharges only stormwater runoff from the roof of TA-35-27. The outfall is located north and slightly east of TA-35-27 on the south slope of Mortandad Canyon. No documented releases of hazardous materials have occurred at this outfall. Investigations conducted during 2004 and 2007 indicate that there are no potential unacceptable risks or doses from the residual contamination for the residential land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 35-016(q) is an active stormwater outfall and associated trench located southeast of TA-35-34, the Sodium Testing Building. The site was included in the investigation of CU 35-016(a)-00. Investigations conducted during 1996 and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the residential land use scenario.

The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

NMED has determined that the above mentioned sites qualify for certificates of completion indicating that additional corrective action under the Consent Order is not required. Although corrective action is complete under the Consent Order, the Permittees must continue to comply with all applicable state and federal regulations. If new information becomes available that indicates that these sites may pose a risk to human health or the environment, NMED may require additional investigations and corrective action at these sites.

Please contact Neelam Dhawan at (505) 476-6042, if you have any questions.

Sincerely,



John E. Kieling
Chief
Hazardous Waste Bureau

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