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DAVE MARTIN
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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

June 30, 2011

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RE: CERTIFICATES OF COMPLETION
MIDDLE MORTANDAD/TEN SITE AGGREGATE AREA SWMUS AND AOCS
EPA ID #NM0890010515
HWB-LANL-11-016

Dear Messrs. Rael and Graham:

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 Thirty-Three Solid Waste Management Units and Twelve Areas of Concern in the Middle Mortandad/Ten Site Aggregate Area*, dated May 20, 2011 and referenced by EP2011-0190.

These 33 Solid Waste Management Units (SWMUs) and 12 Areas of Concern (AOCs) were recommended for corrective action complete in the report entitled *Investigation Report for Middle Mortandad/Ten Site Aggregate Area, Revision 2* (Report), dated February 2008. NMED approved the Report on April 1, 2008. The Permittees have satisfied the requirements of the March 1, 2005 Consent Order for completion of corrective action at these sites.

Sites Not Subject to Controls

Based on the results of investigations, the following 15 SWMUs and 8 AOCs within the Middle Mortandad/Ten Site Aggregate Area qualify for Corrective Action Complete Without Controls status. NMED hereby issues this Certificate of Completion for Corrective Action Complete without Controls for these sites pursuant to Section VII.E.6.b of the Consent Order.

SWMU 05-006(h) consists of potentially contaminated soils in the footprint of the former structure TA-05-09 that lies west of firing pit # 2 (SWMU 05-001(b)). Structure TA-05-09 was constructed in 1944 and was used from 1947 until it was abandoned in place in 1959. The structure was removed during 1985 D&D activities. Depleted uranium was found at the site; soils were excavated to a depth of approximately 16 ft, then backfilled, and the ground surface was re-contoured to the original grade. The site was included in the investigation of consolidated unit (CU) 05-001(a)-99. Investigations conducted during 1995 and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the industrial or residential land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 35-002 is former Material Disposal Area (MDA) X that lies under 0.05 acres of an asphalt parking lot near the southeast corner of building TA-35-2. It is a burial site for the Los Alamos Power Reactor Experiment (LAPRE)-II, which was defueled and decommissioned in 1959. LAPRE-II and associated structures were removed from MDA X in 1991. Radionuclides were detected in soil samples collected during D&D activities. Investigations conducted during 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the industrial or residential land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 35-004(b) is a former asphalt-paved container storage area located at the northeast corner of building TA-35-85. The pad is approximately 25 ft x 35 ft, with its northern edge located about 10 ft from the mesa edge. The storage area has been used to store organic chemical solutions, oils, and rags since 1977. No releases of hazardous materials from the site have been documented, but oil stains on the storage pads were observed during a reconnaissance conducted in 1988. Investigations conducted during 2004 indicate that there are no potential unacceptable risks or doses from residual contamination for the industrial or residential land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 35-004(g) is an asphalt-paved former storage area for waste generated throughout TA-35. It was located on the south side of building TA-35-67, a warehouse. No storage containers were observed at the site during a 1995 site reconnaissance, but several small oil stains and

debris consisting of electrical cables, pallets, iron pellets, and other scrap was present. The site was included in the investigation of CU 35-004(g)-00. Investigations conducted during 2004 indicate that there are no potential unacceptable risks or doses from residual contamination for the recreational or residential land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 35-004(m) is a former storage area for containers of organic chemical solutions, freon, oil, and rags. The site is partially covered with asphalt (5ft x 25ft), adjacent to the paved area south of building TA-35-86. A metal chemical storage building and a trash dumpster, believed to have been transferred from the firing sites at TA-15, were present on the site in 1995, but have since been removed. The location is no longer used as a storage area. The site was included in the investigation of CU 35-014(g)-00. Investigations conducted during 2004 indicate that there are no potential unacceptable risks or doses from residual contamination for the residential and recreational land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

AOC C 35-007 consists of sand and gravel piles located along an unpaved access road north of the sand filter beds. The sand and gravel material may consist of clean material for use in the sand filters and/or used material that may have been removed from the filters. The filters began operating in 1983 and were deactivated in 1992. Investigations conducted during 1995 and 1998 indicate that there are no potential unacceptable risks or doses from residual contamination for the recreational and residential land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 35-009(b) is an abandoned, inactive sanitary septic system located south of a warehouse (building TA-35-67). The septic system operated from 1966 to 1975. It received sanitary wastes and may have received industrial wastes including radionuclides. The septic system included a septic tank, dosing chamber, distribution box, and associated leach field. The septic tank was a steel or steel-lined concrete tank (4 ft x 4 ft x4 ft). The dimensions of dosing chamber are not documented and the distribution box was a 15-ft deep manhole lined with corrugated metal pipe. Specific waste streams and the volumes of discharge are not documented. A Voluntary Corrective Action (VCA) conducted in 1996 included removal and disposal of the tank contents and filling the tank with concrete. The site was included in the investigation of CU 35-004(g)-00. Investigations conducted during 1996 and 2004 indicate that there are no potential unacceptable risks or doses from residual contamination for the recreational and residential land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 35-009(c) is an inactive sanitary septic system and leach field located north of the northern edge of TA-35-02. The septic system consisted of a 1290-gal steel-lined reinforced concrete tank, a distribution box, a manhole cleanout, and a leach field. The leach field covers an approximate area of 1600 ft^2 and extends under a dirt access road that lies along the mesa edge.

The system started operation in 1961. The system was pumped out, filled with concrete, and abandoned in place in following a 1996 VCA. Investigations conducted during 1996 and 2004 indicate that there are no potential unacceptable risks or doses from residual contamination for the recreational and residential land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 35-010(a) is one of three wastewater treatment lagoons located in Ten Site Canyon near the confluence with Pratt Canyon. The lagoon was constructed in 1975, and the sand-filter beds were installed in 1983. Prior to construction of the sand filter beds, the lagoon discharged from an unpermitted outfall, located at the southeast corner of SWMU 35-010(c), into the canyon. The lagoon has concrete sides and was described as having bottom lined with topsoil and bentonite. However, subsequent site investigations indicated that the liner is not present or cannot be distinguished from sludge and weathered tuff at the bottom of lagoon. In addition to sanitary waste, the lagoon is reported to have received radionuclides, organic chemical solutions, and photographic processing wastes. The operations were discontinued in 1992, and the waste was redirected to Laboratory's Sanitary Wastewater Consolidation System (SWCS). 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 residual contamination for the recreational and residential land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 35-010(b) is one of three wastewater treatment lagoons located in Ten Site Canyon near the confluence with Pratt Canyon. The site consists of a lagoon constructed in 1975, and sand-filter beds installed in 1983. Prior to construction of the sand filter beds, the lagoon discharged to the canyon from an unpermitted outfall located at the southeast corner of SWMU 35-010(c). The lagoon has concrete sides and was described as having bottom lined with topsoil and bentonite. However, subsequent site investigations indicated that the liner is not present or cannot be distinguished from sludge and weathered tuff at the bottom of lagoon. In addition to sanitary waste, the lagoon is reported to have received radionuclides, organic chemical solutions, and photographic processing wastes. The operations ceased in 1992, and the waste was redirected to Laboratory's SWCS. 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 residual contamination for the recreational and residential land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 35-010(c) is one of three wastewater treatment lagoons located in Ten Site Canyon near the confluence with Pratt Canyon. The lagoon was constructed in 1975. Sand-filter beds were installed in 1983. Prior to construction of the sand filter beds, the lagoon discharged to the canyon from an unpermitted outfall located at the southeast corner of the site. The lagoon has concrete sides and was described as having bottom lined with topsoil and bentonite. However,

subsequent site investigations indicated that the liner is not present or cannot be distinguished from sludge and weathered tuff at the bottom of lagoon. In addition to sanitary waste, the lagoon is reported to have received radionuclides, organic chemical solutions, and photographic processing wastes. The operations were discontinued in 1992, and the waste was redirected to Laboratory's SWCS. 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 residual contamination for the recreational and residential land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 35-010(d) includes the four sand filter beds that handled wastewater discharged from wastewater treatment lagoons. Water was subsequently discharged into Ten Site Canyon through National Pollutant Discharge Elimination System (NPDES) permitted outfall EPA-SSS-10S. The filters operated from 1983 to 1992. The sand filter beds are constructed of concrete walls that are 3 ft high and 6 in. thick. Each bed measures approximately 50 ft x 50 ft. The sand filter beds are plastic-lined and contain sands of various composition and textures. Approximately 2 ft of filter material is present in each filter, and each successive bed is 1 inch lower than the previous one to create a flow gradient. A diversion channel, which diverts surface water to the east, is present above the filter beds. A second diversion channel to divert the surface water away from the filter beds is present to the west of filter beds. 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 residual contamination for the recreational and residential land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

AOC 35-011(d) consists of two 6000-gal underground storage tanks (USTs) formerly located at the southeast corner of building TA-35-188. The tanks were installed in 1969 and were used to store contaminated dielectric oil used in building TA-35-188. The USTs were removed in 1991 in accordance with NMED UST regulations. The tanks were inspected and found to be in good condition. An adjacent area of stained soil (AOC 35-014(f)) was removed during a 1996 VCA. Investigations conducted in 2004 indicate that the site poses no potential unacceptable risk to the human health or the environment under the industrial and residential land use scenarios.

SWMU 35-014(a) is a former area of soils contaminated by radionuclide emissions from a tritium glovebox facility. The area is located on the southwest side of TA-35-2. The facility released several thousand curies of tritium annually to the atmosphere between 1954 and 1979. The services in the building were decommissioned in 1960. The building and associated piping were removed in 1996. Investigations conducted during 1997 and 2004 indicate that there are no potential unacceptable risks or doses from residual contamination for the recreational and residential land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

AOC 35-014(f) consists of an area of soil stained by oil spills. The site is located on the east side of TA-35-188. The stained soil was located under the base of a compressor that was part of a dielectric oil-handling system that connected a pair of USTs (AOC 35-011(d)) to TA-35-188. The site was cleaned up approximately 45 cubic yards of oil-contaminated waste were removed during 1996 VCA. Investigations conducted during 1996 and 2004 indicate that there are no potential unacceptable risks or doses from residual contamination for the industrial and residential land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

AOC 35-014(g2) is comprised of a number of small oil-stained areas within the former container storage area identified as AOC 35-004(m). The stains were reported to have originated from leaking containers that were formerly stored in the area. The volume and time of the releases is not documented. The container storage area is no longer active and 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 residual contamination for the recreational and residential land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 52-002(a) is a former sanitary septic system. The 2,580-gal septic tank and the associated distribution box were installed in 1965 in association with the former Ultra-High Temperature Reactor Experiment (UHTREX) facility housed at TA-52-01. The UHTREX facility was shut down in 1970. The septic system was used through 1991 when the sanitary wastewater was connected to the SWCS Plant. The former septic system is located north of TA-52-01, approximately 30 ft north of Puye Road and ten ft east of building 52-02. Overflow from the tank flowed into a 300-ft long drainfield trench located near the edge of Ten Site Canyon. The tank was intended to receive only sanitary waste from TA-52-01; however, hazardous constituents and radionuclides may have been inadvertently released to the tank. Investigations conducted during 1995 and 2004 indicate that there are no potential unacceptable risks or doses from residual contamination for the industrial and residential land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

AOC 52-003(a) is the site of a former waste neutralization and pumping facility (TA-52-02) for treating liquid waste from the former UHTREX facility. The building was designed for caustic pre-treatment of liquid acid wastes to neutralize them before they were piped to the radioactive liquid waste treatment facility at TA-50. The treatment facility included five tanks. The entire building and all associated tanks were removed in 1989. Investigations conducted during 1995 and 2004 indicate that there are no potential unacceptable risks or doses from residual contamination for the residential land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

AOC 60-004(c) is a former container storage area located east of a site designated as a solar pond (SWMU 60-005(a)). In 1985, approximately 125 empty but used 55-gal. containers were stacked along the east fence for about eight months. Stains were noted on the ground at the site during 1986 field investigations. The containers were disposed at TA-54, Area J. Investigations conducted during 1994 indicate that there are no potential unacceptable risks or doses from residual contamination for the industrial and residential land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

AOC 60-004(e) is a former outdoor storage area near the east end of Sigma Mesa. The area was used to store transformers containing PCB-contaminated oil and other salvaged heavy equipment and/or decommissioned USTs awaiting removal. The area was remediated in 1992, but no sampling was performed at that time. Investigations conducted during 1994 and 2004 indicate that there are no potential unacceptable risks or doses from residual contamination for the industrial and residential land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 60-005(a) is an inactive Hypalon-lined solar pond on the east side of the Sigma Mesa. The pond, which was created in 1979, is a failed evaporation experiment that contained treated liquid radioactive effluent from the TA-50 industrial wastewater treatment plant. Between August 1979 and June 1981, a total of 140, 000 gallons of treated effluent was trucked to the pond, from holding tanks at TA-50. The pond was monitored with a leak-detection system and no leakage was detected as of January 1981. Leak-detection monitoring ceased after 1981. Between 1981 and 1989, quarterly visual inspections were conducted to check on water levels and the pond liner. The pond was cleaned in 1989 and the liner was found to be intact. Liquid that remained in the pond was removed and dirt and debris was removed from the pond. Investigations conducted during 1994 and 2004 indicate that there are no potential unacceptable risks or doses from residual contamination for the industrial and residential land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 63-001(a) is an inactive 1000-gal septic tank and its associated seepage pit and drainline. The seepage pit is 4-ft in diameter and 50 ft deep. The system served modular buildings and trailers. It was removed from service in 1993 when the sewer lines were connected to SWCS at TA-46. Suspect contaminants at the SWMU include solvents and other unspecified chemicals. No documentation of spills or releases was found. Investigations conducted during 1995 indicate that there are no potential unacceptable risks or doses from 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 63-001(b) is an inactive 920-gal septic tank and its associated seepage pit and drainline. The seepage pit is 4-ft in diameter and 50 ft deep. The system served TA-63-01 and received

sanitary wastewater. TA-63-01 houses offices, a machine shop, and an electronics shop. The system was registered as an Unpermitted Individual Liquid Waste System, NMED registration number LA-09. Suspect contaminants at the SWMU include solvents and other unspecified chemicals. There is no documentation regarding spills or releases. Investigations conducted during 1995 indicate that there are no potential unacceptable risks or doses from 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.

Sites Subject to Controls

Based on the result of investigations, the following 18 SWMUs and 4 AOCs within the Middle Mortandad/Ten Site Aggregate Area qualify for Corrective Action Complete With Controls status. NMED hereby issues these Certificates of Completion for Corrective Action Complete with Controls for the following sites pursuant to Section VII.E.6.b of the Consent Order.

SWMU 35-003(a) is an underground holding tank associated with SWMU 35-003(n), described as a phase separator pit (PSP). The exhaust from the laboratory hoods was routed to the PSP for removal of the liquids before being sent to the air filter building (SWMU 35-003(p)). The liquid wastes from building TA-35-02 were stored temporarily in one of the three underground holding tanks where the liquid was caustic-treated to reduce acidity before being sent to large concrete holding tanks (SWMU 35-003(d)) located at the east end of TA-35. The PSP and the holding tanks were a closed system in which liquid flowed from building TA-35-2 into the PSP and then into the tanks for temporary storage and subsequently back into PSP for treatment. It is not known when the tank was last used. There are no documented releases from this system. The tank was removed in 1996. The site was included in the investigation of CU 35-003(a)-99 that included components of the former waste water treatment plant (WWTP). Investigations conducted during 1995, 1996, 1997, and 2004-2005 indicate that there are no potential unacceptable risks or doses from 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 control for the site is that its use must be restricted to industrial activities.

SWMU 35-003(b) is an underground holding tank associated with SWMU 35-003(n), described as a phase separator pit (PSP). The exhaust from the laboratory hoods was routed to the PSP for removal of the liquids before being sent to the air filter building (SWMU 35-003(p)). The liquid wastes from building TA-35-2 were stored temporarily in one of the three underground holding tanks where the liquid was caustic-treated to reduce acidity before being sent to large concrete holding tanks (SWMU 35-003(d)) located at the east end of TA-35. The PSP and the holding tanks were a closed system in which liquid flowed from building TA-35-2 into the PSP and then into the tanks for temporary storage and subsequently back into PSP for treatment. It is not known when the tank was last used. There are no documented releases from this system. The

tank was removed in 1996. 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 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 control for the site is that its use must be restricted to industrial activities.

SWMU 35-003(c) is an underground holding tank associated with SWMU 35-003(n), described as a phase separator pit (PSP). The exhaust from the laboratory hoods was routed to the PSP for removal of the liquids before being sent to the air filter building (SWMU 35-003(p)). The liquid wastes from building TA-35-2 were stored temporarily in one of the three underground holding tanks where the liquid was caustic-treated to reduce acidity before being sent to large concrete holding tanks (SWMU 35-003(d)) located at the east end of TA-35. The PSP and the holding tanks were a closed system in which liquid flowed from building TA-35-2 into the PSP and then into the tanks for temporary storage and subsequently back into PSP for treatment. It is not known when the tank was last used. There are no documented releases from this system. The tank was removed in 1996. 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 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 control for the site is that its use must be restricted to industrial activities.

SWMU 35-003(d) is the site of the former liquid-waste holding building, which was a rectangular, reinforced concrete structure, composed of four separate 50,000 gallon tanks (TA-35-10). Each tank was 35 ft wide and 85 ft long and was situated mostly below ground level with the top portions exposed. The tanks did not have drain outlets. All liquids were pumped out for treatment and discharged from the WWTP. The tanks were removed in February 1985 and soil samples were collected from the general vicinity. 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 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 control for the site is that its use must be restricted to recreational activities.

SWMU 35-003(e) is the site of a former 25,000 gallon storage tank (TA-35-36) that was added to the WWTP in 1960. The tank was used to store liquid radioactive waste. The tank was connected to building TA-35-7 by two lines. The drainlines led to a surface diversion channel (SWMU 35-001(l)). The storage tank and drainlines were removed in 1981. The extent of soil contamination to the diversion channel is not 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 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 control for the site is that its use must be restricted to industrial activities.

SWMU 35-003(f) is a former flocculator tank (TA-35-37). The tank was added as part of the wastewater treatment plant in 1956 and used until 1963 when the plant was abandoned. The tank was removed in 1980. 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 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 control for the site is that its use must be restricted to industrial activities.

SWMU 35-003(g) is the former site of an ion exchange column regenerant tank. This tank was added along with the flocculator tank in 1956 and used until 1963 when the plant was abandoned. The tank was removed in 1980 to prepare for the D&D of the WWTP's underground liquid waste lines. 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 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 control is that the site use must be restricted to industrial activities.

SWMU 35-003(j) is the site of a former aboveground storage tank located on the west side of building TA-35-29. This area is a former waste-oil treatment facility. The tank was removed in 1988 or 1989. The treatment facility was reported to be leaking dielectric oil in 1988. Subsequently, the leaking equipment was removed and the site backfilled with clean soil material and covered with asphalt to create parking area. The site was included in the investigation of CU 35-003(j)-99. Investigations conducted during 1995 and 2004 indicate that the total excess cancer risk at SWMU 35-003(j) for an industrial scenario is at 8×10^{-5}, which is above the NMED target level of 1×10^{-5}. However, the total excess risk is the result of polycyclic aromatic hydrocarbons (PAHs) detected at inaccessible locations that are under the asphalt or adjacent to a dumpster in an area used only for trash disposal. Currently, there are no complete exposure pathways to an industrial worker. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site. The control is that the site use must be restricted to industrial activities. In addition, the Permittees must ensure that

locations with elevated PAH concentrations remain inaccessible, thus maintaining an incomplete exposure pathway to a worker. If current conditions change at the site, the Permittees must re-evaluate the risk and NMED may require additional investigation/remedial action.

SWMU 35-003(k) is the site of a former 12 ft x 33 ft aboveground storage tank (TA-35-97) located 23 ft west of the northwest corner of TA-35-29. The tank was installed in 1974 and removed in 1976. This area is a former waste-oil treatment facility (SWMU 35-003(j)), reported to be leaking dielectric oil in 1988. Subsequently, the leaking equipment was removed and the site backfilled with clean fill material and covered with asphalt to create parking area. The site was included in the investigation of CU 35-003(j)-99. Investigations conducted during 1995 and 2004 indicate that the total excess cancer risk at SWMU 35-003(k) for an industrial scenario is at 8×10^{-5}, which is above the NMED target level of 1×10^{-5}. However, the total excess risk is the result of PAHs detected at inaccessible locations that are under the asphalt or adjacent to a dumpster in an area used only for trash disposal. Currently, there are no complete exposure pathways to an industrial worker. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site. The control is that the site use must be restricted to industrial activities and the Permittees must ensure that locations with elevated PAH concentrations remain inaccessible, thus maintaining an incomplete exposure pathway to a worker. If current conditions change at the site, the Permittees must re-evaluate the risk and NMED may require additional investigation/remedial action.

SWMU 35-003(l) is the site of a former pump pit (TA-35-08) located adjacent to a pipe utility trench and liquid-waste holding tanks. The pump pit was approximately 10 ft x 14 ft and housed two large capacity electric pumps and associated valves and piping to transfer liquid waste between the holding tanks to TA-35-7. The pump pit also had floor drains that discharged to a surface diversion channel. The pump pit and associated piping was removed in 1984. No radioactive contamination was detected at these structures. 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 residual contamination exist 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 control for the site is that its use must be restricted to recreational activities.

SWMU 35-003(m) is the former site of a 1000-gallon underground sludge tank (TA-35-22). The tank was part of a pilot plant scale unit meant to remove strontium-90 from waste sludge. The tank was removed in 1981. During the removal, soil surrounding the tank was found to be contaminated with strontium-90 and cesium-137. The soil was excavated laterally until activity could not be detected above background, and below the tank to bedrock (a depth of approximately 10 ft). At this depth, fractures in the rock measured by field-screening instruments indicted presence of beta activity. The excavation was stopped, the tank was removed and excavation was backfilled with clean soil and paved over with asphalt. The site was included in the investigation of CU 35-003(a)-99 that included components of the former

waste water treatment plant (WWTP). Investigations conducted during 1995, 1996, 1997, and 2004-2005 indicate that there are no potential unacceptable risks or doses from 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 control for the site is that its use must be restricted to industrial activities.

AOC 35-003(misc) consists of the network of underground lines connecting the various structures of the TA-35 WWTP. The piping was generally constructed from stainless, black, or galvanized steel with screwed or welded joints. The majority of these lines were removed from 1981 through 1985. Releases of radioactive contamination to the environment from these lines were documented. The releases typically occurred at depths of 15 to 20 ft below ground surface in the trenches containing the lines. The extent of contaminant migration from these releases were determined as part of building demolition activities in 1996. Building TA-35-07 and associated piping including lines designated AOC 35-003(misc) were removed at that time. 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 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 control is that the site use must be restricted to industrial activities.

SWMU 35-003(n) is the former phase separator pit. The exhaust from laboratory hoods was routed to the PSP for removal of liquids before being sent to an air filter building (TA-35-7). The PSP and the holding tanks were a closed system in which liquid flowed from building TA-35-2 into the PSP, then to the tanks for temporary storage, and subsequently back into PSP for treatment. There are no documented releases from this system. The PSP was removed in 1996. 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 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 control for the site is that the use must be restricted to industrial activities.

SWMU 35-003(o) is the site of a former manhole; structure number TA-35-12. The manhole, subsurface line 90A, and 86 cubic yards of contaminated soil adjacent to the east wall of building TA-35-7 were removed in January 1985. Testing of samples collected following the excavation indicated presence of beta activity. Because further excavation may have compromised the integrity of building, the area was backfilled and paved over with asphalt. 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 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 control for the site is that the use must be restricted to industrial activities.

SWMU 35-003(q) is the site of a former pipe trench (TA-35-09) that connected buildings TA-35-2, TA-35-3, and TA-35-7 to the former WWTP and connected the pump pit to the waste holding tanks. The trench contained at least five pipelines that connected pump pit to each of the four holding tanks. The trench was approximately 60 ft long x 10 ft wide. The pipe trench contained floor drains that discharged to the surface diversion channel. The pipe trench was removed in 1984. At least 11 spills or non-operational releases were documented from the piping or the holding tanks from 1951 to 1956. 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 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 control for the site is that the use must be restricted to recreational activities.

SWMU 35-009(e) is a 4-in vitrified clay tile pipe installed in 1956 connected to six floor drains inside building TA-35-25. The pipe ran 30 ft from the building and discharged to an open ditch that extended from the end of the tile pipe to the edge of the canyon. The drainline does not pass through a septic tank or a leach field. The outfall has not been located to date and may have been covered by asphalt. Investigations conducted during 1997 and 2004 indicate that there are no potential unacceptable risks or doses from 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 control for the site is that the use must be restricted to recreational activities.

SWMU 35-014(b) is the former site of a leaking barrel of dielectric oil east of building TA-35-2. The barrel was a 55 gallon drum discovered to be leaking in 1985. The oil contained PCBs. The drum was removed and the site was remediated. The site was included in the investigation of CU 35-003(j)-99. Investigations conducted during 1995 and 2004 indicate that the total excess cancer risk at SWMU 35-014(b) for an industrial land use scenario is at 8×10^{-5}, which is above the NMED target level of 1×10^{-5}. However, the total excess risk is the result of PAHs detected at inaccessible locations that are either under the asphalt or adjacent to a dumpster in an area used only for trash disposal. Currently, there are no complete exposure pathways to an industrial worker. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site. The control is that the site use must be restricted to industrial activities and the Permittees must ensure that locations with elevated PAH concentrations remain inaccessible, thus maintaining an incomplete exposure pathway to a

worker. If current conditions change at the site, the Permittees must re-evaluate the risk and NMED may require additional investigation/remedial action.

AOC 35-014(d) is an area of soil stained by oil spills. It is the former location of two tanks (SWMUs 35-003(j) and 35-003(k)) at the southwest corner of building TA-35-29. The soil at the site may be stained by dielectric oil that leaked from the hose connections to the tanks. The volume of the oil leak is not documented. In 1988 or 1989, the site was covered with clean fill material and paved with asphalt to create a parking area. The site was included in the investigation of CU 35-003(j)-99. Investigations conducted during 1995 and 2004 indicate that the total excess cancer risk at AOC 35-014(d) for an industrial land use scenario is at 8×10^{-5}, which is above the NMED target level of 1×10^{-5}. However, the total excess risk is the result of PAHs detected at inaccessible locations that are either under the asphalt or adjacent to a dumpster in an area used only for trash disposal. Currently, there are no complete exposure pathways to an industrial worker. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site. The control is that the site use must be restricted to industrial activities and the Permittees must ensure that locations with elevated PAH concentrations remain inaccessible, thus maintaining an incomplete exposure pathway to a worker. If current conditions change at the site, the Permittees must re-evaluate the risk and NMED may require additional investigation/remedial action.

SWMU 35-015(a) is the site of a decommissioned tank farm and waste-oil treatment facility formerly located west of building TA-35-86. The former waste-oil treatment facility reprocessed used dielectric oil from the Helios CO_2 laser in building TA-35-86 and included oil surge tanks TA-35-149 through TA-35-154, a grease trap, and an oil-treatment unit. When the oil recycling process was complete, separated water was discharged into Ten Site Canyon through a storm sewer. Investigations conducted during 1995, 1997, and 2004 indicate that there are no potential unacceptable risks or doses from 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 control for the site is that the use must be restricted to industrial activities.

SWMU 35-015(b) is the former site of an oil-handling facility located on the southwest side of building TA-35-29. The facility was used to treat oil from the Gemini gas laser. This facility was found to be leaking dielectric oil in 1988 and was removed in 1989 or 1990. The volume of the leak is not documented and there is no documentation of a cleanup effort after the leak was discovered. However, the site was covered with clean fill material and paved with asphalt to create a parking area. The site was included in the investigation of CU 35-003(j)-99. Investigations conducted during 1995 and 2004 indicate that the total excess cancer risk at SWMU 35-015(b) for an industrial scenario is at 8×10^{-5}, which is above the NMED target level of 1×10^{-5}. However, the total excess risk is the result of PAHs detected at inaccessible locations that are either under the asphalt or adjacent to a dumpster in an area used only for trash disposal. Currently, there are no complete exposure pathways to an industrial worker. The results of the

ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site. The control is that the site use must be restricted to industrial activities and the Permittees must ensure that locations with elevated PAH concentrations remain inaccessible, thus maintaining an incomplete exposure pathway to a worker. If current conditions change at the site, the Permittees must re-evaluate the risk and NMED may require additional investigation/remedial action.

AOC 35-016(j) is an active outfall that was constructed in 1975 to discharge rainwater runoff from building TA-35-125 roof drains and from the fire protection system. A Santa Fe Engineering report documents 8 roof drains and 4 fire protection drains that discharge to the storm drain leading to Ten Site Canyon. There were no laboratory sinks or floor drains connected to this outfall. All rooms/laboratories that housed polishing activities were plumbed directly to the sanitary sewer, floor drains were plugged were polishing occurred. Investigations conducted during 1995, 1997, and 2004 indicate that there are no potential unacceptable risks or doses from 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 control for the site is that the use must be restricted to recreational activities.

AOC 35-018(a) is the former site of a reported leaking transformer. The transformer was documented as leaking onto porous concrete pad with no spill containment or drip pan. The extent of the release to the underlying pad was not documented. The site was remediated during a 1996 project and 9 cubic yards of PCB-contaminated waste was removed. Investigations conducted during 1995 and 2004 indicate that the total excess cancer risk at AOC 35-018(a) for an industrial scenario is at 3×10^{-5}, which is above the NMED target level of 1×10^{-5}. However, the total excess risk is the result of PAHs detected at inaccessible locations that are under asphalt. Currently, there are no complete exposure pathways to an industrial worker. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site. The control is that the site use must be restricted to industrial activities and the Permittees must ensure that locations with elevated PAH concentrations remain inaccessible, thus maintaining an incomplete exposure pathway to a worker. If current conditions change at the site, the Permittees must re-evaluate the risk and NMED may require additional investigation/remedial action.

If new information becomes available that indicates that any of the sites may pose a risk to human health or the environment, NMED may require the Permittees to conduct additional investigation or remediation. NMED hereby issues this Certificate of Completion for 45 sites discussed above pursuant to section VII.E.6.b of the Consent Order.

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

Sincerely,

for

John E. Kieling
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File: 2011 LANL, Certificates of Completion for Middle Mortandad/Ten Site Canyon AA Sites (LANL 11-016)

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