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Los Alamos Field Office, MS A316  
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Los Alamos, New Mexico 87544  
(505) 667-4255/FAX (505) 606-2132

Date: **NOV 25 2014**  
Refer To: ADESH-14-111

Ms. Paulette Johnsey, Chief  
U.S. Environmental Protection Agency, Region 6  
Compliance and Assurance Division  
Water Enforcement Branch (6EN)  
1445 Ross Avenue, Suite 1200  
Dallas, Texas 75202-2733

Mr. Everett Spencer  
U.S. Environmental Protection Agency, Region 6  
Compliance and Assurance Division  
Water Enforcement Branch (6EN)  
1445 Ross Avenue, Suite 1200  
Dallas, Texas 75202-2733

**Subject: NPDES Permit No. NM0030759- Los Alamos National Laboratory's Response to Written Public Comment on the Request for Alternative Compliance for Site Monitoring Area M-SMA-7.9**

Dear Ms. Johnsey and Mr. Spencer:

The U.S. Department of Energy and Los Alamos National Security, LLC, hereafter, the Permittees, submitted an alternative compliance request for Site 50-006(d) within M-SMA-7.9 to the U.S. Environmental Protection Agency (EPA) on April 21, 2014. Part I.E.3(b) of Individual Industrial Storm Water National Pollutant Discharge Elimination System Permit No. NM0030759 (the Individual Permit or Permit) requires the Permittees to make available the alternative compliance request and all supporting documentation for public review and written comment for a period of 45 days. The public notice for this alternative compliance request was published on May 1, 2014.

Public comments were received from Communities for Clean Water (CCW) on June 13, 2014. The Permittees have prepared written responses to all relevant and significant comments, which will also be posted on the Individual Permit section of the Los Alamos National Laboratory's public website, available at <http://www.lanl.gov/community-environment/environmental-stewardship/protection/compliance/individual-permit-stormwater/documents.php>. The attachments to this letter include a copy of CCW's comments and the Permittees' written response.

Site 50-006(d) was placed into corrective action following a target action level (TAL) exceedance for polychlorinated biphenyls (PCBs) and gross-alpha radioactivity. As discussed in the alternative compliance request, PCBs were managed at Site 50-006(d); however, the very low levels of PCBs detected in shallow soil samples at this Site demonstrate that no historical release of PCBs occurred at this Site, and therefore, PCBs are not a significant industrial material associated with

Site 50-006(d). The distribution and concentrations of PCBs do not mirror the known release of radionuclides, discussed below.


The isotopic analyses of soil samples reported under the March 2005 Compliance Order on Consent indicated that alpha contamination associated with Site 50-006(d) consists primarily of americium and plutonium isotopes, which is also consistent with Site history. As noted in the alternative compliance request, americium and plutonium isotopes are excluded from the definition of adjusted gross-alpha radioactivity under the Atomic Energy Act exclusion in the Clean Water Act.

CCW in its comments on the alternative compliance request stated, "...Figure 2 of the request shows a disconnect between the end of the Outfall 051 discharge pipe and the SMA. In fact, Figure 2 shows that the end of the discharge pipe is not within the SMA drainage area." The New Mexico Environment Department Surface Water Quality Bureau (NMED-SWQB) during August 2014 Individual Permit inspection questioned whether the current sampler location would adequately capture storm water impact from Site-related releases. During the inspection, the Permittees explained the rationale for selecting the sampler location. That is, the current location of the SMA sampler was selected to represent storm water captured from within the solid waste management unit boundary, a 0.483-acre area located on the hillslope south of the current radioactive liquid waste treatment facility (RLWTF) pipe terminus. The current sampler location was selected because documentation of the exact location of the pre-1995 RLWTF drain line outfall was not available in 2009–2010, when the Individual Permit was issued. The SMA does not capture runoff from Effluent Canyon drainage where the RLWTF currently terminates.

Based upon the questions raised by both the CCW and NMED-SWQB regarding the need for additional, more representative sampling, the Permittees request that EPA delay its response to the alternative compliance request for M-SMA-7.9 to allow them to deploy, collect, and analyze paired run-on/runoff storm water samples. The Permittees propose to monitor storm water runoff at two locations within Effluent Canyon, above and below the current outfall location (Figure 1 of the Permittees' response). Storm water monitoring results collected from above the current outfall location (the run-on location) will be used to characterize run-on water quality, and the sampler downstream of the current outfall location will be used to characterize any impacts from Site 50-006(d) (the run-off location). Given the seasonal nature of rain events in northern New Mexico, these samplers will be deployed in fall 2014, but it is likely that no samples will be collected until mid- to late summer of 2015. Once a minimum of two sets of run-on/runoff paired storm water samples is collected and analyzed, the Permittees will prepare and submit an addendum to the M-SMA-7.9 alternative compliance request to EPA.

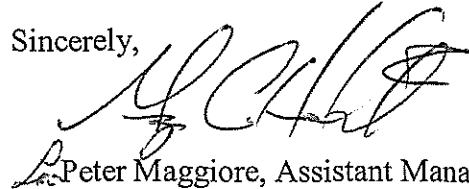
If you have any questions or require additional information, please contact Steve Veenis at (505) 667-0013 (veenis@lanl.gov) or David Rhodes at (505) 665-5325 (david.rhodes@mnsa.doe.gov).

Sincerely,



Michael T. Brandt, DrPH, CIH, Associate Director  
Environment, Safety, and Health  
Los Alamos National Laboratory

Sincerely,



Peter Maggiore, Assistant Manager  
Environmental Projects Office  
Los Alamos Field Office

MB/PM/DM/SV/TK:sm

Attachments: (1) Communities for Clean Water Comments on the Alternative Compliance Request for M-SMA-7.9  
(2) Response to Communities for Clean Water Comments on Los Alamos National Laboratory's Alternative Compliance Request for M-SMA-7.9 (LA-UR-14-28055)

Cy: (w/enc.)  
Bruce Yurdin, NMED-SWQB, P.O. Box 5469, Santa Fe, NM 87502 (paper & electronic copy)  
Sarah Holcomb, NMED-SWQB, P.O. Box 5469, Santa Fe, NM 87502 (paper & electronic copy)  
Public Reading Room (EPRR)  
RPF (electronic copy)

Cy: (Letter and CD and/or DVD)  
Tadz Kostrubala, EP-CAP, MS M992  
PRS Database with ER ID

Cy: (w/o enc.)  
Isaac Chen, EPA Region 6, Dallas, TX (date-stamped letter emailed)  
Renea Ryland, EPA Region 6, Dallas, TX (date-stamped letter emailed)  
John Kieling, NMED-HWB, Santa Fe, NM (date-stamped letter emailed)  
James Hogan, NMED-SWQB, Santa Fe, NM (date-stamped letter emailed)  
lasomailbox@nnsa.doe.gov  
Annette Russell, DOE-NA-LA (date-stamped letter emailed)  
David Rhodes, DOE-NA-LA (date-stamped letter emailed)  
Kimberly Davis Lebak, DOE-NA-LA (date-stamped letter emailed)  
Kate Lynnes, EP-REG (date-stamped letter emailed)  
Steve Veenis, EP-CAP (date-stamped letter emailed)  
Dave McInroy, EP-CAP (date-stamped letter emailed)  
Michael Brandt, ADESH (date-stamped letter emailed)

**Attachment 1**

**Communities for Clean Water Comments  
on the Alternative Compliance Request for M-SMA-7.9**





June 13, 2014

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Re: Alternative Compliance Request for M-SMA-7.9  
ERID-255539

Dear Mssrs. Chen, Rhodes and Veenis:

Please accept the following comments on behalf of Communities for Clean Water (CCW) on the Alternative Compliance Request for M-SMA-7.9.

## **I. Introduction**

Communities for Clean Water, a network of community groups working together since 2005 to address water contamination at Los Alamos National Laboratory (LANL), would like to thank the Environmental Protection Agency (EPA), Department of Energy (DOE) and LANL for working collaboratively with us over the past several years in seeking solutions to cleanup pollution found in

stormwater. We believe that we have developed a productive working relationship together and plan to continue that relationship for the remainder of the current permit and into the future to address water protection and restoration on the Pajarito Plateau.

CCW, with technical assistance from our consultants at Biohabitats, Inc., has been actively advocating for a holistic approach to stormwater management at LANL. Our emphasis has been on use of Green Infrastructure (GI), Low Impact Design (LID), and treatment.

LANL has a unique opportunity to be a leader in developing and testing GI and LID stormwater management measures and treatment that could be effective in the challenging climate of the arid southwest. The Individual Stormwater Permit (IP) and this associated alternative compliance request provide a strong regulatory structure for developing this leadership. We urge the EPA and both DOE/LANL to rise to the challenges to ensure clean water.

Our specific concerns and suggestions are outlined in the comments below. Generally we believe that substantially more can be done at M-SMA-7.9, the site for the alternative compliance request, to reduce contaminant levels in the run-on and runoff. The lack of action proposed in the request is not adequate to protect water quality and meet Clean Water Act requirements.

#### **A. Site Description**

The Site Monitoring Area (SMA) M-SMA-7.9 was created as the result of waste activities and discharges from Technical Area 50 (TA-50), the Radioactive Liquid Waste Treatment Facility (RLWTF). M-SMA-7.9 is located in the narrow Effluent Canyon, which flows into Mortandad Canyon, where there are a number of large dirt retention structures for discharges from the 051 discharge pipe and stormwater runoff through Effluent Canyon to Mortandad Canyon.

TA-50 has a NPDES permit to discharge through Outfall 051 into Effluent Canyon. For more than two decades, the New Mexico Environment Department has tried to permit the discharges from TA-50 through Outfall 051. *Please see* NMED Ground Water Quality Bureau (GWQB) permit history below.

The 051 Outfall discharge created a wetland in the canyon that was frequented by wildlife. The Permittees have not mentioned the status of the wetland in their description for alternative compliance measures.

In the early 2000s, one CCW commenter toured the outfall area and found it to be – at the time – the hottest (highest radiation measurements) of any place she had been on the DOE/LANL site. Further, Figure 2 of the request shows a disconnect between the end of the Outfall 051 discharge pipe and the SMA. In

fact, Figure 2 shows that the end of the discharge pipe is not within the SMA drainage area. This is one reason that EPA should deny the request for alternative compliance measures.

## **II. Background Metals and PCB Reports**

### **A. General Comments**

The two reports attached to the alternative compliance request, “Background Metals Concentrations and Radioactivity in Storm Water on the Pajarito Plateau, Northern New Mexico” and “ Polychlorinated Biphenyls in Precipitation and Stormwater within the Upper Rio Grande Watershed” present data showing that urban runoff concentrations at LANL frequently exceed target action levels (TALs) for metals and PCBs. As a result, the argument put forward by Permittees is that it will not be possible to meet Target Action Levels (TALs) at M-SMA-7.9. CCW has a different perspective on these reports. CCW contends that these extensive reports provide very useful information that could be used by LANL to drastically reduce pollutants at Site Monitoring Area (SMA) monitoring locations, the official points of compliance in the permit, by targeting areas that have been shown to contribute to the urban runoff problem. These reports could help prioritize where to install stormwater management measures to control run-on and runoff throughout the urbanized areas at LANL. TALs can potentially be met with implementation of enough strategically placed Best Management Practices (BMPs) throughout the SMA and in upland areas. CCW urges DOE/LANL to capitalize on the extensive resources and effort that went into drafting these reports to work for positive on the ground change in water quality.

### **B. Background Metals Report**

This report contains large amounts of data that have been collected at numerous locations on the laboratory site as well as areas north (Reference Sites) and west (Western Boundary sites). These data lead us to ask the following questions:

- Rainfall data - what types of storms were monitored (e.g., intensities) and were any samples collected during the same storms across all sampling sites? It appears that there is little overlap between urban, reference, and western areas based on Figures 4, 5, and 6.
- The land use, soil type, size, and imperviousness of each watershed sampled as a background or reference should be presented.
- TALs in the permit are the water quality standards in the Rio Grande and receiving waters. The report should state this.

In addition, the metals report offers few conclusions about the data and results in difficulty comparing results across areas (i.e., presenting Reference and Western Boundary with Urban Runoff data in same table), but some that were noticed include:



- TALs are for dissolved metals. Urban runoff pollutants that exceeded TALs (mean and median) are copper and zinc. Reference Area and Western Boundary have no exceedances (mean and median).
- Concentrations for typical urban runoff metals (e.g., chromium, copper, nickel, and zinc) were all higher in mean and median in urban samples than Reference Area and Western Boundary.

### **III. Permit Requirements**

#### **A. SMA Approach**

The permit very clearly identifies SMA sampling locations as the points of compliance in the permit. DOE/LANL actively advocated for the SMA approach in the current permit, assuring CCW and EPA that representative monitoring was feasible at the SMA level. The permit states, "SMA locations are based on reasonable site accessibility for sampling purposes and the Permittees' best judgment to ensure that samples taken at a particular point will be representative of discharges from Sites in the drainage area" (Part I.D.2.). Therefore, as the representative monitoring locations, SMAs are the points of compliance and DOE/LANL should be doing everything possible to reduce TALs at those locations.

If alternative compliance is granted for this SMA by EPA, the approval should be accompanied with widespread implementation of post construction runoff controls such as have been suggested previously to DOE/LANL staff by CCW and our technical experts with Biohabitats, Inc. DOE/LANL has already started down this path with the two LID controls focused on urban runoff at S-SMA-0.25 as proposed in the alternative compliance request for that site. This approach should be developed further and many more controls should be required under any final alternative compliance work plan.

There are very clear requirements, as outlined in the permit, for relocating the sampling locations, such as, "The permit may be modified, in accordance with the provisions of 40 CFR 122.62, to relocate a SMA based on a determination that the SMA is no longer representative of the drainage area for a Site or Sites..." Provisions at 40 CFR 122.62 require that any permit modification, such as changing a representative monitoring location, must include a formal process with a public comment period.

#### **B. Section E.3**

Section E.3 of the permit states that if Permittees are unable to certify Completion of Corrective action under the sections E.2.(a) through E.2.(d) of the permit due to "force majeure events, background concentrations of pollutants of concern, site conditions that make it impracticable to install further control measures, or

pollutants of concern beyond the Permittees' control." The two background studies referenced in the alternative compliance request and mentioned above outline pollutant concentrations that contribute stormwater from the urban landscape at LANL. The urban landscape on LANL property is clearly within the Permittees' control and every effort should be made to control these pollutants to improve water quality.

#### **IV. Acknowledging Our Government's Occupation and Pollution of Sacred Places**

We cite the following Declarations of Indigenous Women that acknowledge the U.S. occupation and pollution of sacred places on the Pajarito Plateau. The Declarations state the threats and harms from dangerous industries such as is the Los Alamos National Laboratory nuclear, chemical and biological weapons complex. Recommendations are made and references to actions being taken to restore justice and well-being to Indigenous communities. Summaries of the Declarations are below. The information therein documents the environmental justice aspects of this alternative compliance request.

##### ***A. Las Mujeres Hablan: The Women Speak - Women's Declaration for New Mexico 2010***

9. Be it further resolved that we will support the work of **Las Mujeres Hablan**. (New Mexico Acequia Association (NMAA); Honor Our Pueblo Existence (HOPE), Tewa Women United (TWU); Concerned Citizens for Nuclear Safety (CCNS); Embudo Valley Environmental Monitoring Group (EVEMG); New Mexico Conference of Churches (NMCC); Community Service Organization (CSO) Del Norte

**Mission:** To address past, present and future issues arising from the nuclear industry's releases of toxic chemicals and radioactive materials that cause contamination to our land, air, and water; demand clean-up of these sites; question the continued manufacturing of nuclear weapons; and restore justice to the Peoples who have been impacted by this industry. And, address other activities that violate and cause harm to our environment and well-being within the Sacred Mountains of New Mexico and other places in the world,

***B. Indigenous Women and Environmental Violence***, A Rights-based approach addressing impacts of Environmental Contamination on Indigenous Women, Girls and Future Generations. Submitted to the United Nations Permanent Forum on Indigenous Issues Expert Group Meeting *Combating Violence Against Indigenous Women and Girls*, January 18 – 20, 2012, United Nations Headquarters,

New York, by Andrea Carmen, International Indian Treaty Council and Indigenous Women's Environmental and Reproductive Health Initiative, and Viola Waghiyi, Native Village of Savoonga, St. Lawrence Island, Alaska and Alaska Community Action on Toxics – Theme 2: *Contextualizing Violence*.

*From a traditional perspective, the health of our Peoples cannot be separated from the health of our environment, the practice of our spirituality and the expression of our inherent right to self-determination, upon which the mental, physical and social health of our communities is based.*

--- IITC Oral Intervention presented by Faith Gemmill, Gwich'in Nation Alaska United Nations Working Group on Indigenous Populations, Geneva July 31, 1996

**C. Report of the International Indigenous Women's Environmental and Reproductive Health Symposium**, April 27<sup>th</sup> – 29<sup>th</sup>, 2012, Chickaloon Native Village, Alaska. Co-hosted by the International Indian Treaty Council (IITC) and Indigenous Women's Initiative for Environmental and Reproductive Health, Alaska Community Action on Toxics (ACAT), Chickaloon Native Village and International Indigenous Women's Forum (FIMI). Submitted to the 11<sup>th</sup> Session of the United Nations Permanent Forum on Indigenous Issues as a Conference Room Paper by the International Indian Treaty Council, Indigenous Non-governmental Organization in General Consultative Status to the United Nations Economic and Social Council. May 5<sup>th</sup>, 2012. Kathy WanPovi Sanchez, of Tewa Women United, and Marian Naranjo, of Honor Our Pueblo Existence, participated in the Symposium and signed the Report.

Based on these shared understandings, we adopt by consensus this ***2nd DECLARATION for the Health, Survival and Defense of OUR LANDS, OUR RIGHTS and our FUTURE GENERATIONS and make the following recommendations:***

**That Indigenous Peoples, Nations and Communities:**

- 1) Identify and document the disproportionate impacts of environmental toxins on Indigenous women and children as "environmental violence" for which States and corporations can be held accountable.
- 2) Provide community capacity-building and training linking reproductive and environmental health and human rights.
- 3) Maintain, support, strengthen and assert traditional systems of law, community organization, decision-making, leadership and

representation.

**D. Sovereignty: Long Live Mother Earth – Women’s Declaration 2012: Year of Indigenous Women**, by Las Mujeres Hablan: The Women Speak, which include Honor Our Pueblo Existence, Tewa Women United, and Concerned Citizens for Nuclear Safety.

29. Be it further resolved that we will work in solidarity with each other in our struggles to defend the air, land, and water from contamination, exploitation, and militarization,

30. Be it further resolved that we honor, respect, and recognize the dignity of women and their families throughout the world and here at home who are subjected to exposure to toxins through their work, their food, or their proximity to pollution and that we resolve to speak and act in solidarity with them in efforts to defend the health of their families and communities,

31. Be it further resolved that we will continue to play an important role in reshaping our communities to achieve a vision of safe, healthy, and joyful lives for our families and communities with good, healthy and locally grown food, good livelihoods that honor the dignity of every human person, and a meaningful and spiritual relationship with Mother Earth.

**E. References to Indigenous Women in the ALTA Outcome Document**, Compiled and submitted to the World Conference of Indigenous Women, October 28 -30, 2013, Lima, Peru, by Andrea Carmen (North America Region) and Mililani Trask (Pacific Region).

*Recommend* that States uphold and respect the right of self determination and the free, prior and informed consent of Indigenous Peoples who do not want mining and other forms of resource extraction, “development” and technologies deemed as degrading to their human, cultural, **reproductive** and ecosystem health. Where mining and other forms of resource extraction are already occurring, States shall develop mechanisms with the full and effective participation of Indigenous Peoples to develop a comprehensive strategy for ecologically sustainable and equitable development to end and prevent uncontrolled and unsustainable industrial contamination and degradation with plans for clean-up, remediation and restoration. Such as strategy shall incorporate strengthening the capacity of Indigenous youth in relation to sustainable development practices based on Indigenous knowledge and the relationship with the land as well as the protection and

promotion of the important role of traditional knowledge holders including Indigenous Elders and **women**; (*Theme 1: Indigenous Peoples' lands, territories, resources, oceans and waters, Paragraph 6*)

## V. Alternative Compliance Request

### A. General Observations

The request contains a lot of information and confusing terminology with limited definitions and clear distinctions. As an example, there are data references to Background, Reference, and Run-on, all of which can be confusing to follow. In some cases, these references appear to relate to the Background Metals Report. Related to this, it is confusing that the background data from the metals report was used as a comparison to the TALs at some points of the reports instead of run-on samples. Run-on samples are site-specific and provide a better representation of runoff concentrations prior to runoff from the Solid Waste Management Units (SWMUs) combining and being monitored at the outlet of the SMA. *See* Attachment B. It appears the 95% confidence interval for the background concentrations (taken from the Background Metals Report) is being compared to the SMA concentrations. Clarification is needed. The Permittees must be required to provide clarification about the comparison. They must explain why there are two different statistical populations and why the background data is not being developed based on site-specific data.

### B. Specific Comments

1. The conclusion that the concentrations measured at the SMA monitoring location are not influenced by the historical use at the SWMU is not fully supported by the data. In fact, the alternative compliance request specifically states that both PCBs and radioactive materials were historically used at the site. *See* request at sections 4.2 and 7.1. The NPDES permit for Outfall 051 includes a PCB limit that indicates that there is reasonable potential for additional PCBs to be discharged at a later date, presumably from historical contamination and use of the materials.

While there is urban runoff that has shown levels of these contaminants at higher levels than those found at this site, the monitoring has not been developed to the point one can say definitively that the SWMU is *not* contributing to TAL exceedance. The request at section 7.1.1 specifically says that the site does not directly receive runoff from urban areas. The report mentions PCB sampling from run-on locations, however, the locations and full sampling results from these sites are not provided in the request. It is difficult, therefore, to determine if these run-on sites are adequately addressed by the Permittees.

In addition, no gross alpha run-on sampling was mentioned. DOE/LANL asks to be released from its obligations for clean-up activities and given a pass based on their assumptions of the site, rather than providing concrete evidence that the site is not contributing to the TAL exceedances. There is no basis provided in this request for the EPA to grant it, other than belief in these assumptions--not science.

2. The M-SMA-7.9 site is located at a facility that has had some of the largest releases of toxic materials in LANL's history. Many impacted downstream and downwind CCW communities have been advocating for clean up of this site for many years. CCW asserts that making compliance determinations at this site from a single sample is irresponsible and does not address community concerns.

CCW expressed concerns about the representativeness of the SMA monitoring approach when the current individual stormwater permit was drafted. DOE/LANL have acknowledged our concerns in their recent permit renewal application, when they wrote, "[a]t the time the current Individual Permit was drafted, this subwatershed sampling approach was *assumed* to be representative of the point-source releases from the Site or Sites within the SMA. Substantial new information collected since the Sites and SMAs were selected for the current Permit demonstrates that this assumption was frequently incorrect." [Emphasis added.]<sup>1</sup>

Due to the sensitive nature of this site and the lack of confidence in the representativeness of the sampling location, including the concern that the SMA boundary, as displayed in Figure 2 of the request, does not include the pipe or the historic outfall location, CCW requests that further sampling be conducted prior to the EPA making decisions about the alternative compliance request. This sampling effort should include an assessment of the representativeness of the sample location. CCW requests that CCW members and CCW consultants be allowed to tour the site to determine the representativeness of the sampling location.

3. There should be an opportunity for the public to provide additional comment if EPA sends this alternative compliance request back to DOE/LANL for additional information and clarification.

4. There should be--and Commenters hereby request--a public hearing on this alternative compliance request because the stormwater run-off at issue here runs into the Mortandad Canyon and, there is a high probability, onto the sovereign territory of the Pueblo de San Ildefonso. Although the application states that the

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<sup>1</sup> Los Alamos National Laboratory Renewal Application for NPDES Permit No.

RLWTF has not discharged since 2010 and is relying upon mechanical evaporation, during a long history of use, the facility has in the past discharged voluminous quantities of highly contaminated radioactive and other materials through NPDES permitted Outfall 051. In addition, DOE/LANL maintains a NPDES permit for the TA-50 facility indicating that there is a potential for future releases.

Hazardous material from discharges from this facility has accumulated in the sediments and surface soils as well as infiltrating to sub-soils. Stormwater runoff from this site carries this material down the canyon, spreading it and, in all likelihood, carrying it into the sovereign territory of the Pueblo de San Ildefonso.

This request shows that DOE/LANL has done little to analyze either this continuing source of spreading pollution or the extent of the pollution already spread. No studies, no research, no documentation is referenced in the request.

5. For almost two decades, the state of New Mexico has tried to administratively process a groundwater discharge permit for the TA-50 RLWTF under its Ground Water Quality Bureau (rather than as a regulated unit under the Resource Conservation and Recovery Act (RCRA) and the New Mexico Hazardous Waste Act--which would seem to apply given the DOE/LANL claim in this request that the facility has ceased discharging since 2010. There is significant public interest in this groundwater discharge permit process, including requests for a permit hearing in 1995 by two CCW members.

It is also significant that the RLWTF has no operating permit at present – other than the New Mexico Hazardous Waste Permit for one outdoor container storage unit and one indoor container storage unit. It has been without a permit or any other basis to operate (other than an EPA NPDES permit for discharges that LANL says are no longer taking place) since the advent of the RCRA.

Moreover, to the Commenters' knowledge, there are no permits in place for the alternatives to discharge mentioned in the application--the mechanical evaporator system. *See* Section 4.1 at 8. Freedom of Information Act (FOIA) requests to EPA Region 6 and DOE were unable to produce any documentation showing that DOE/LANL, in using this alternative means of disposal, was able to meet air pollution control limits for radionuclides (including tritium) and a variety of metals in solution within the water being evaporated. *See* 40 CFR 61, Subpart H.

DOE/LANL have requested that NMED provide permit coverage for an alternative to discharge--a passive solar evaporation tank (SET) that, to the Commenters' knowledge, is not under any permit--and therefore none of the same type of data has been produced and evaluated so that there is any

assurance of occupational or public health and safety in the use of this means of liquid and solid hazardous waste disposal. *See generally* section 4.1 at 8.

6. There is no closure plan for the TA-50 RLWTF. Yes, there are closure plans in the Hazardous Waste Permit for the indoor and outdoor container storage units, but they are limited to the container storage units. RCRA requires that the public have the opportunity to review the closure plan as part of the permitting process. Closure plans are important as demonstrated recently when Chevron/Molycorp announced that it would be closing the molybdenum mine near Questa, New Mexico. Fortunately, a closure plan is in place and the community is reviewing it in preparation for closure. No closure plan is available for TA-50 RLWTF and a remedy must be found.

7. DOE/LANL should not be permitted to utilize alternative compliance in whole or in part because it has not demonstrated that it meets any of the criteria for granting the use of alternative compliance in relation to M-SMA-7.9. The criteria are quite specific. The Permittee must demonstrate that, in whole or in pertinent and particular part, it cannot meet the permit requirements due to:

- (a) force majeure events,
- (b) background concentrations of pollutants of concern,
- (c) site conditions that make installing further control measures impracticable, or
- (d) pollutants of concern contributed by sources beyond the Permittee's control.

The Permittees have not developed "a detailed demonstration of how they reached the conclusion that they are unable to certify completion of corrective action under Parts I.E.2(a) through (d) individually or collectively." LA-UR-14-22489 at 7 (April 2014). They must also include in such demonstration "any underlying studies and technical information." *Id.*

8. DOE/LANL fails to provide any evidence that, for the gross-alpha ascertained, any testing was done for more than just gross-alpha. How could DOE/LANL demonstrate the present or absence of any element other than the broad category of alpha emitters without some form of assay other than alpha detection? Yet, in this request, one finds generalizations concerning the source of the alpha radiation that must be pure speculation.

9. This request, as mentioned above, is based on numerous assumptions, not fact. Typical of this request is the following statement:

The evaluation of corrective action options was based on the following assumptions: (1) the Site is not considered to have



contributed to the TAL exceedances (2) undeveloped and developed "background" PCBs likely contribute to the TAL exceedances and (3) undeveloped background concentrations of naturally occurring alpha-emitting radionuclides contribute to gross-alpha radioactivity in excess of the TAL for adjusted gross-alpha radioactivity. Because the Site is not considered a source of the TAL exceedances, no installation of storm water controls would be reasonably expected to reduce the concentration TAL constituents from the Site. Id. Section 8.0 at 17.

This is a very curious statement. It moves from "assumptions" to taking those assumptions as proven without adducing any proof, turning them into conclusions, viz. initial assumptions are suddenly the justification for the conclusion, as under the assumption the Site is "not considered a source..." Where is the proof that the site is not the source of the TAL exceedances?

10. There is no mention of the Permeable Reactive Barrier (PRB) that was installed in the late 1990s or early 2000s below the 051 Outfall to capture the RCRA constituents and possibly radionuclides. Construction errors were numerous and may have opened pathways for stormwater to enter the shallow alluvial zones and deeper groundwater zones.

11. Section 8.4. The Permittees state, "Consent Order investigation sampling and removal of contaminated soil are scheduled to be performed between March and November of 2015." There is no reference to the Consent Order documents, correspondence, etc. One CCW commenter spent over 30 minutes researching the NMED website and LANL Electronic Public Reading Room for such documentation, with no results. References must be provided by the Permittees in their request in order for the public to provide informed comments.

12. NMED issuance of certificates of completion under the Consent Order are subject to a Class 3 permit modification request. CCW remains concerned about the number of certificates of completion – possibly hundreds - issued by NMED that have not been subject to Class 3 permit modification process, which includes an opportunity for a public hearing. NMED has issued a number of certificates of completion under the individual stormwater permit, which have not been noticed for Class 3 permit modification request administrative processes. This is an on-going problem.

13. How does the Alternative Compliance Request address DOE's requirements in DOE Order 458.1, "Radiation Protection of the Public and the Environment," Approved 2-11-11?

### **C. Recommendations**

1. The Alternative Compliance Request for M-SMA-7.9 should be denied.
2. If it is not denied, EPA should request that DOE/LANL provide the necessary documentation to support the assertions in the request and require that the request be put out again for public comment.
3. If EPA does not either deny the report or send it back and require it to be re-noticed, Commenters recommend that EPA provide a public hearing opportunity on the alternative compliance request.
4. Commenters also recommend that there be a pre-hearing meeting with all Commenters, the Permittees and EPA to attempt to resolve some of the issues raised in these comments.
5. Further sampling should be conducted prior to any compliance decision. This sampling effort should include an assessment of the representativeness of the sample location. As part of this effort, CCW requests that CCW members and consultants be allowed to tour the site to review the representativeness of the sampling location.
6. DOE/LANL should continue to identify additional controls including LID/GI controls across the site. With implementation of LID practices, an effort should be made to monitor their pollutant removal effectiveness and apply that information for design adaptations and wider implementation. This could provide DOE/LANL with avenues for its scientific and technical expertise to become a leader in developing effective LID practices in the arid southwest.
7. The goal of meeting TALs should be included in any final alternative compliance workplan.
8. Future permits should focus management of runoff within the entirety of each SMA, with more specific guidance and requirements that consider targets for treating untreated impervious areas, recommend practice types, recommend design standards, define maintenance requirements, require monitoring and more.

We look forward to the opportunity to discuss these comments in further detail with you.

Sincerely,

For Communities for Clean Water

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cc: EPA  
NMED Surface Water Quality Bureau

**Attachment 2**

**Response to Communities for Clean Water Comments on  
Los Alamos National Laboratory's Alternative Compliance Request for M-SMA-7.9**



**Response to Communities for Clean Water's Comments on  
Los Alamos National Laboratory's Alternative Compliance Request for M-SMA-7.9**

Comment No.	Comment Summary	The Permittees Comment Response
<b>I. Introduction</b>		
A. Site Description	<p>Communities for Clean Water (CCW) question why the Permittees have not mentioned the status of a wetland created by the Outfall 051.</p> <p>CCW also comments that during a tour in the early 2000s, one CCW commenter found the outfall area "to be...the hottest (highest radiation measurements) of any place she had been on the DOE/LANL site."</p> <p>Further, CCW states, "Figure 2 of the request shows a disconnect between the end of the Outfall 051 and the [site monitoring area] SMA. In fact, Figure 2 shows that the end of discharge pipe is not within the SMA drainage area. This is one reason that EPA [the U.S. Environmental Protection Agency] should deny the request for alternative compliance measures."</p>	<p>The Permittees have no documentation of a designated wetland below the outfall. The status of outfall and its permitted discharge are covered by Los Alamos National Laboratory's (LANL's) National Pollutant Discharge Elimination System (NPDES) industrial and sanitary permit NM0028355 and are outside the scope of the Individual Permit.</p> <p>The Permittees do not have the field radiation measurement referenced in this comment. Permittees will review and provide additional comments if CCW provides the referenced data. Compliance Order on Consent (Consent Order) soil investigation of radionuclides and results for this Site are described in LANL's response to Comment B.8 below.</p> <p>The current pipe terminus of the 50-006(d) Radioactive Liquid Waste Treatment Facility (RLWTF) drainline is in Effluent Canyon within the active stream channel. This location is depicted in Figure 1 of this response as the "Current Outfall Location." Resource Field Investigation documentation indicates this outfall has been active since 1986. Before then, the former discharge location was 25 ft south of the stream channel and was extended in 1985–1986 to terminate at the current location (the Operable Unit 1147 Resource Conservation and Recovery facility investigation [RFI] work plan). This former outfall location is depicted in Figure 1 as the "former outfall location." The 25-ft pipe extension area is covered with soil such that the pipe is not visible on the hillslope and the hillslope maintains a constant slope into the stream channel. No documentation is available showing the pipe discharged to any other location.</p> <p>In the early 2000s, a geographic information system (GIS) was implemented to store information on solid waste management unit (SWMU) boundaries at LANL. To create the GIS SWMU boundaries, hand-drawn SWMU boundaries presented in maps and figures were transferred into computer-based boundaries. During this GIS transfer, it is likely the "former outfall location" of the RLWTF was interpreted to be farther south on the hillslope. This location is shown in Figure 1 as the "GIS-interpreted outfall location." Based on this interpreted outfall location, a release area below the GIS-interpreted outfall location was recorded in GIS as part of the SWMU boundary. This location is shown in Figure 1 as the "GIS-interpreted outfall release area location."</p>

Comment No.	Comment Summary	The Permittees Comment Response
		<p>The current Individual Permit points of compliance of the SMA sampler locations listed in Appendix A were established in consultation with EPA and New Mexico Environment Department Surface Water Quality Bureau (NMED-SWQB). During this consultation the Permittees were advised to locate SMA samplers close to the Site GIS boundary to minimize non-Site run-on and to best represent Site runoff.</p> <p>Soil sampling investigation results reported in the Investigation Report for Upper Mortandad Canyon Aggregate Area, Revision 1 (LA-UR-10-2046, April 2010) were not available when the NPDES Individual Permit No. NM0030759 (Individual Permit or Permit) was issued in 2010. Soil sampling results confirm there was no evidence of release of Site-related contaminants (radionuclides regulated under the Atomic Energy Act of 1954) in the vicinity of the GIS-interpreted outfall location and release area.</p> <p>The baseline confirmation monitoring sample collected from M-SMA-7.9 on September 13, 2013, was from the Permit sampler location that captures representative storm water runoff across the GIS-interpreted outfall area and GIS-interpreted release area as well as storm water run-on from the upgradient undeveloped hillslope.</p> <p>To capture storm water runoff from the area potentially impacted by the discharges from the RLWTF (below the former outfall location and current outfall location), the SMA sampler would have to be moved into Effluent Canyon. At this location, the SMA sampler would capture runoff from a 69-acre area that includes large areas of industrially developed LANL areas within Technical Area 35 (TA-35), TA-48, TA-50, and TA-55. If the Permit sampler was to be moved into Effluent Canyon, it would likely detect concentrations of polychlorinated biphenyls (PCBs) from developed landscapes and not potential impacts from the SWMU. To distinguish between developed landscape PCB sources and impacts from the SWMU, a run-on sampler would need to be deployed and paired samples collected and analyzed.</p> <p>This significant of a sampler move would require a permit modification request, per Section 1.D.2 of the Individual Permit, and restarting confirmation monitoring per Section E.5.(f). In its March 27, 2014, response to the Permittees' alternative compliance request for Sites in S-SMA-0.25 and S-SMA-2.0 and the permit modification request for S-SMA-6, EPA stated that it would not process the permit modification request and would evaluate rationales about contaminant sources and SMA representativeness as part of the Individual Permit reissuance process.</p>

Comment No.	Comment Summary	The Permittees Comment Response
		<p>Based upon EPA's response to the S-SMA-6 permit modification request, the Permittees do not plan to submit any requests until after the new Individual Permit is issued.</p> <p>As part of the alternative compliance demonstration for M-SMA-7.9, the Permittees propose to monitor storm water runoff at two locations within Effluent Canyon, above and below the current outfall location. Storm water monitoring results collected from above the current outfall location will attempt to characterize run-on water quality (see Figure 1). To characterize storm water potentially impacted by the SWMU release storm water, monitoring will occur approximately 700 ft downstream of the current outfall location (see Figure 1), just upstream of the confluence with Mortandad Canyon in Effluent Canyon.</p> <p>Based upon the questions raised by both the NMED-SWQB and CCW regarding the need for additional, more representative sampling, the Permittees are requesting that EPA delay its response to the alternative compliance request for M-SMA-7.9 to allow them to deploy, collect, and analyze paired run-on/runoff storm water samples. Storm water monitoring results will be reported to EPA as supplemental information in a revision to the alternative compliance request for M-SMA-7.9.</p>
<b>II. Background Metals and PCB Reports</b>		
A. General Comments	CCW contends that these reports [i.e., "Background Metals Concentrations and Radioactivity in Storm Water on the Pajarito Plateau in Northern New Mexico" and "Polychlorinated Biphenyls in Precipitation and Stormwater within the Upper Rio Grande Watershed] "provide very useful information that could be used by LANL to drastically reduce pollutants at Site Monitoring Area (SMA) monitoring locations...by targeting areas that have been shown to contribute to the urban runoff problem."	Non-point source urban runoff and background sources of pollutants are not Site-related and are not regulated under the Individual Permit. Please see the response to Section III. Comment B, Section E.3, for a more detailed discussion.



Comment No.	Comment Summary	The Permittees Comment Response
	CCW urges the Permittees to “capitalize on the extensive resources and effort that went into drafting these reports [i.e., “Background Metals Concentrations and Radioactivity in Storm Water on the Pajarito Plateau in Northern New Mexico” and “Polychlorinated Biphenyls in Precipitation and Stormwater within the Upper Rio Grande Watershed] to work for positive on the ground change in water quality.”	Comment noted.
B. Background Metals Report	CCW poses a number of questions about the data and results presented in the “Background Metals Concentrations and Radioactivity in Storm Water on the Pajarito Plateau in Northern New Mexico” (hereafter, Background Metals Report)	<p>The comments suggested changes to the Background Metals Report. Amendments to this report are outside the scope of the alternative compliance request process. Additional storm water data has been collected through the 2014 field season and an update to this report is being prepared. As discussed during the August 2014 Individual Permit technical meeting with CCW, the U.S. Department of Energy (DOE)/Los Alamos National Security, LLC (LANS) the Permittees committed to seeking comments to the revised Background Metals Report from CCW and NMED. A draft of the revised report was provided to CCW and NMED during the October 2014 WebEx. LANS is currently incorporating the comments, as appropriate.</p> <p>In addition, Amigos Bravos, a member of CCW, has directly acknowledged the validity of the data and results presented in the Background Metals Report. Amigos Bravos used this report as a key factual basis of its June 30, 2014, petition for a “Determination that Storm Water Discharges in Los Alamos County Contribute to Water Quality Standards Violations and Require a Clean Water Act Permit.”</p>
<b>III. Permit Requirements</b>		
A. SMA Approach	CCW states that as monitoring locations SMAs are “points of compliance” and therefore the Permittees should be doing everything possible to reduce target action levels (TALs) at the SMA sampling locations because SMAs are representative of Site runoff.	Where the Permittees believe they have installed measures to minimize pollutants in their storm water discharges at a Site or Sites, as required by Part I.A of the Permit, but are unable to certify completion of corrective action under Sections E.2(a) through E.2(d) (individually or collectively), the Permittees may seek to place a Site into alternative compliance, the provision in the Individual Permit that allows the Permittees to demonstrate why they believe TALs cannot be met including, but not limited to, a demonstration that TAL exceedances at the SMA sampler are not from the Site.

Comment No.	Comment Summary	The Permittees Comment Response
	<p>If EPA grants alternative compliance for this SMA, CCW believes the approval should include widespread implementation of post-construction runoff controls. Low-impact design (LID) controls should be evaluated and included in any work plan issued by EPA pursuant to this alternative compliance request.</p>	<p>The request to install the two LID controls referenced by CCW was denied by EPA in its March 27, 2014, response to the alternative compliance requests for S-SMA-0.25.</p> <p>The alternative compliance request, if granted by EPA, would be for Site 50-006(d), not the SMA (See Part I.E.3). The Permittees have not proposed constructing any controls at the Site because the TAL exceedance is not Site-related. If EPA approves this alternative compliance request, the Permittees will continue to maintain the baseline control measures that were installed in accordance with Part. I.A and will comply with any monitoring required by EPA in its site-specific work plan.</p>
	<p>There are clear permit modification requirements in the Individual Permit for moving an SMA sampler location when the Permittees have determined that the SMA is no longer representative of the drainage area for a Site or Sites.</p>	<p>In its March 27, 2014, response to the Permittees' alternative compliance request for Sites in S-SMA-0.25 and S-SMA-2.0 and the permit modification request for S-SMA-6, EPA stated that it would not process the permit modification request and would evaluate rationales about contaminant sources and SMA representativeness as part of the Individual Permit reissuance process.</p> <p>Based upon EPA's response to the S-SMA-6 permit modification request, the Permittees do not plan to submit any requests until after the new Individual Permit is issued. In addition, the Permittees have updated the Site description for Site 50-006(d).</p>
B. Section E.3	<p>It is CCW's contention that "the urban landscape on LANL property is clearly within the Permittees' control and every effort should be made to control these pollutants to improve water quality."</p>	<p>Non-point source urban runoff is not regulated under the Individual Permit. Amigos Bravos, a member of CCW, used this exclusion of urban runoff from the Individual Permit as one of the bases for its June 30, 2014, petition for a "Determination that Storm Water Discharges in Los Alamos County Contribute to Water Quality Standards Violations and Require a Clean Water Act Permit" (That is, "<i>Further the individual permits for LANL and Los Alamos County do not cover storm water discharges from the urbanized features that generate the pollution</i>" [p. 8 of the petition] and Statement of Fact 22, "<i>NM0030759 does not regulate general urbanized runoff at LANL or from the Los Alamos Townsite.</i>")</p>

Comment No.	Comment Summary	The Permittees Comment Response
<b>IV. Acknowledging our Government's Occupation and Pollution of Sacred Spaces</b>		
	<p>Summaries of the following five Declarations of Indigenous Women have been provided by CCW to document the environmental justice aspects of this alternative compliance request:</p> <ul style="list-style-type: none"> <li>• Las Mujeres Hablan: The Women Speak – Women's Declaration for New Mexico 2010.</li> <li>• Indigenous Women and Environmental Violence</li> <li>• Report of the International Indigenous Women's and Environmental and Reproductive Health Symposium</li> <li>• Sovereignty: Long Live Mother Earth – Women's Declaration 2012: Year of Indigenous Women</li> <li>• References to Indigenous Women in the ALTA Outcome Document</li> </ul>	<p>Comment noted.</p>
<b>V. Alternative Compliance Request</b>		
<p>A. General Observations</p>	<p>CCW notes that the request for alternative compliance contains "confusing terminology" and requests clarification about the data and results presented in the Background Metals Report, including (1) the use of the 95% confidence level, (2) the use of "two different statistical populations," and (3) the use of regional versus site-specific data for the development of background values.</p>	<p>The 2013 Background Metals Report and the 2012 PCB Report presented the results of an investigation to determine the chemical composition of storm water runoff associated with background, baseline, and urban conditions. The generation and use of background statistics for PCBs, metals, and radioactivity do not preclude the generation and use of more targeted site-specific run-on and runoff comparisons at individual SMAs.</p> <p>Within the context of the Individual Permit, "background" is defined as substances or locations that are not influenced by the releases from a Site:</p> <ul style="list-style-type: none"> <li>• Human-caused—natural and human-made substances present in the environment as a result of human activities.</li> <li>• Naturally occurring—substances present in the environment in forms that have not been influenced by human activity.</li> </ul> <p>After conducting an exhaustive data quality objective exercise with the NMED Oversight Bureau, LANL determined locations for collecting storm water samples to represent background levels of metals and radioactivity within two distinct areas or location groups:</p> <ul style="list-style-type: none"> <li>(a) locations at the western boundary of LANL</li> <li>(b) locations to the north of Los Alamos County Townsite (also identified as reference locations)</li> </ul>

Comment No.	Comment Summary	The Permittees Comment Response
		<p>PCB background representing baseline levels of PCB concentrations in precipitation was also measured within these location groups. These background locations were are distant from current or former developed landscapes and LANL activities to avoid any known contamination and to provide reasonable estimates of natural background concentrations, including a wide variety of bedrock source areas and sediment.</p> <p>The 2013 Background Metals Report and the 2012 PCB Background Report calculated separate statistics describing western and northern locations. The 2012 PCB Report went further by calculating statistics for baseline levels of PCBs in the combined population of both northern and western locations. The 2013 Background Metals Report did not evaluate northern and western locations as a single population. This oversight is being corrected with an Individual Permit-specific metals and radioactivity background report currently being prepared that evaluates statistics of a single population of analytical results from both northern and western locations. The two location groups representing background northern and western locations have slightly different parent geology, weathering products, and distribution of vegetation; however, they are generally representative of the natural condition found on LANL property.</p> <p>To determine the chemical composition of storm water runoff in urban watersheds, LANL selected locations in developed urban landscapes in Los Alamos County containing buildings, roads, parking lots, and associated infrastructure. Urban sampling locations were selected to avoid any LANL legacy contamination but to be representative of developed landscapes and contaminants associated with structures and activities within that environment. Site-specific comparisons of storm water running onto a Site and storm water running off of the Site are being planned, but the collection of run-on storm water will not always be possible because the contributing watershed to the run-on sampler will be small for some Sites.</p> <p>Water quality conditions measured at background and urban locations reflect the constituent levels in storm water runoff derived from the landscape. The 95% upper tolerance limit (UTL) is used to determine if the concentration of a constituent detected in a storm water sample is greater than would be expected from background or baseline conditions. In addition, the EPA's software ProUCL was used to compute the UTLs, and a minimum of seven detections was used to calculate meaningful, representative, and robust UTL values. Additional information on the operational aspects of ProUCL software, including the 95% tolerance limit used to determine background values, is available at <a href="http://www.epa.gov/osp/hstl/tsc/software">http://www.epa.gov/osp/hstl/tsc/software</a>.</p>

Comment No.	Comment Summary	The Permittees Comment Response
		<p>As allowed by Part I.E.2 of the Individual Permit, background concentrations of pollutants of concern should be considered in an alternative compliance request where those concentrations could prevent the Permittees from certifying corrective action complete. As stated in the alternative compliance request, the gross-alpha concentration detected at M-SMA-7.9 (51.4 pCi/L) is well below the background concentration UTL for the reference watersheds (1490 pCi/L), and the PCB concentration detected at M-SMA-7.9 (2.2 ng/L) is also well below the background concentration UTL for the reference watersheds (11.7 ng/L). While the Site/SMA is located within the LANL boundary and may have been impacted by Site/LANL activities, the comparison to reference watershed UTLs demonstrates the TAL exceedance is not greater than reference watersheds.</p> <p>The alternative compliance request submitted to EPA addresses the Part I.E.2 requirements; however, in light of NMED-SWQB and CCW comments regarding the need for additional, more representative sampling, the Permittees are requesting that EPA delay its response to the alternative compliance request for M-SMA-7.9 to allow them to deploy, collect, and analyze paired run-on/runoff storm water samples.</p>
B. Specific Comments	1. CCW challenges the Permittees' conclusion that the TAL exceedances recorded at the SMA sampler are not related to historical SWMU activities and requests clarification.	<p>The Sites identified for inclusion in the Individual Permit are a subset of the SWMUs that are being addressed under the Consent Order. A SWMU is defined as is a discernible unit at which solid wastes may have been "routinely and systematically released," possibly resulting in a release of hazardous constituents. A Site that meets the definition of a SWMU is evaluated for inclusion in the Individual Permit based on the following criteria: (1) the SWMU is exposed to storm water (e.g., not capped or subsurface); (2) the SWMU contains "significant industrial material" (e.g., not cleaned up or has contamination in place); and (3) the SWMU potentially impacts surface water.</p> <p>Site 50-006(d) was placed into corrective action following a TAL exceedance for PCBs and gross-alpha radioactivity. As discussed in the alternative compliance request, PCBs were managed at Site 50-006(d); however, the very low levels of PCBs detected in shallow soil samples at this Site demonstrate that no historical release of PCBs occurred at this Site and therefore PCBs are not a significant industrial material associated with Site 50-006(d).</p> <p>A new NPDES permit for Outfall 051 was issued in October 2014 and has no permit limit for PCBs because of any reasonable potential for additional PCBs to be discharged. A reporting requirement was added to the permit conditions in lieu of the limit. Outfall 051 is regulated under another NPDES permit and is outside of the scope of the Individual Permit and this request for alternative compliance.</p>

Comment No.	Comment Summary	The Permittees Comment Response
		<p>As proposed in the response to Comment I.A, the Permittees propose to monitor storm water runoff at two locations within Effluent Canyon, above and below the current outfall location. Storm water monitoring results collected from above the current outfall location (the run-on location) will be used to characterize run-on water quality, and the sampler downstream of the current outfall location will be used to obtain more representative samples that will characterize any impacts from Site (the run-off location).</p>
	<p>2. CCW requests additional sampling before EPA takes action on this alternative compliance request because of CCW's lack of confidence in the representativeness of the SMA sampling approach and location.</p>	<p>Based upon the questions raised by both the NMED-SWQB and CCW regarding the need for additional, more representative sampling, the Permittees are requesting that EPA delay its response to the alternative compliance request for M-SMA-7.9 to allow them to deploy, collect, and analyze paired run-on/runoff storm water samples. Storm water monitoring results will be reported to EPA as supplemental information in a revision to the alternatives compliance request.</p> <p>As discussed in section I.A above, the Permittees propose to monitor storm water runoff at two locations within Effluent Canyon, above and below the current outfall location. This will allow the Permittees to distinguish between developed landscape sources and impacts from the SWMU.</p> <p>It should be noted, however, that sampling frequency requirements are established in the Individual Permit. Part I.D.1.(b) directs the Permittees to collect confirmation samples from two separate storm events within 18 mo of the effective date of the Individual Permit. If no sample could be collected before the second year of the Individual Permit (i.e., September 30, 2012), the compliance period is extended for a 1-yr period following the first successful sampling event. Part I.E.5.(d) states that if during any period in which two confirmation samples are required, only one confirmation sample could be collected from a measureable storm event, compliance with applicable TALs for that Site will be determined by the single confirmation sample result.</p> <p>The first confirmation sample for Site 50-006(d) was collected on September 13, 2013, and the results were received on October 22, 2013. Because only one sample could be collected within the allowable time frame, this alternative compliance request was based on this one sample, per the requirement of the Individual Permit Part I.E.5(d), as described above.</p>

Comment No.	Comment Summary	The Permittees Comment Response
	3. CCW requests an opportunity for public comment if EPA sends this alternative compliance request back to the Permittees for additional information and clarification.	Part I.E.3(c) of the Individual Permit details the consequences of an EPA denial of an alternative compliance request. Part I.E.3(d) details the path forward if EPA approves an alternative compliance request in whole or in part. Neither Part I.E.3(c) nor Part I.E.3(d) provides for a second opportunity for public comment.
	4. CCW requests a public hearing on this alternative compliance request because of potential impacts from historical discharges associated with the TA-50 RLWTF and the existing NPDES permit for this facility.	Part I.E.3 of the Individual Permit does not provide the public with the opportunity to request a public hearing. Any potential current or future discharges from Outfall 051 are not within the scope of the Individual Permit and are regulated under a separate NPDES permit.
	5. CCW has outlined its concerns regarding the status of various state environmental permits for the TA-50 RLWTF.	The status of various state environmental permits for the TA-50 RLWTF is outside the scope of this alternative compliance request. CCW is encouraged to contact the responsible agencies directly regarding its concerns.
	6. CCW expresses its concern that no closure plan is available for the TA-50 RLWTF.	The status of a RCRA closure plan for the TA-50 RLWTF is outside the scope of this alternative compliance request. CCW is encouraged to contact the responsible agency directly regarding its concerns.
	7. CCW challenges the Permittees assertion that the alternative compliance request satisfies the burden of proof in Part I.E.3(a) and requests additional information.	<p>CCW is correct that Part I.E.3 of the Individual Permit lists the following examples of conditions that could prevent the Permittees from certifying corrective action complete: force majeure events, background concentrations of pollutants of concern, Site conditions that make installing further control measures impracticable, or pollutants of concern contributed by sources beyond the Permittees' control. This list provides examples of the type of conditions that EPA will consider as the basis for an alternative requirements request; however, the list is not inclusive. "[The Permittees] are unable to certify completion of corrective action under Sections E.2(a) through E.2(d) above (individually or collectively) due, <i>for instance</i>, to force majeure events..." (emphasis added). Based upon the information provided in the Permittees' alternative compliance request and the public comment process, EPA must determine whether the Permittees have sufficiently met the criteria for granting an alternative compliance status for Site M-SMA-7.9.</p> <p>The Permittees believe the information provided in the alternative compliance request met the burden of proof in Part I.E.3(a). The two storm water background reports were cited in Section 10.0, References. In addition, these two reports (i.e., "Background Metals Concentrations and Radioactivity in Storm Water on the Pajarito Plateau, Northern New Mexico" and</p>

Comment No.	Comment Summary	The Permittees Comment Response
		<p>“Polychlorinated Biphenyls in Precipitation and Stormwater within the Upper Rio Grande Watershed”) are available on the LANL external Individual Permit webpage (<a href="http://www.lanl.gov/community-environment/environmental-stewardship/protection/compliance/individual-permit-stormwater/index.php">http://www.lanl.gov/community-environment/environmental-stewardship/protection/compliance/individual-permit-stormwater/index.php</a>). In fact, Amigos Bravos used the two background storm water reports cited above in its June 30, 2014, petition for a “Determination that Storm Water Discharges in Los Alamos County Contribute to Water Quality Standards Violations and Require a Clean Water Act Permit.”</p> <p>The investigation report containing the Consent Order soil data discussed in this alternative compliance was inadvertently left out of Section 10.0, References. The complete reference for this report is Investigation Report for Upper Mortandad Canyon Aggregate Area, Revision 1 (LA-UR-10-2046, April 2010) and it is available in the Electronic Public Reading Room (the EPRR), available at <a href="http://www.lanl.gov/community-environment/environmental-stewardship/public-reading-room.php">www.lanl.gov/community-environment/environmental-stewardship/public-reading-room.php</a>.</p> <p>The final decision on the adequacy of the Permittees’ alternative compliance request is EPA’s. If EPA grants the alternative compliance request in whole or in part, it will issue a new individually tailored work plan for the Site or Sites. EPA will also extend the compliance deadline for completion of corrective action, as necessary, to implement this work plan. If EPA denies the alternative compliance request, it will promptly notify the Permittees of the specifics of its decision and of the time frame under which corrective action must be completed under Parts I.E.2(a) through I.E.2(d).</p> <p>As stated in the response to Comment I.A, based upon the questions raised by both the NMED-SWQB and CCW regarding the need for additional, more representative sampling, the Permittees are requesting that EPA delay its response to the alternative compliance request for M-SMA-7.9 to allow them to deploy, collect, and analyze paired run-on/runoff storm water samples.</p>
	<p>8. CCW questions the technical validity of how the Permittees tested storm water for gross-alpha radioactivity.</p>	<p>The Permittees analyzed the storm water samples for gross-alpha radioactivity and radium in accordance with the sampling requirements in Appendix B of the Individual Permit.</p> <p>The Permittees’ statements concerning the nature of the radionuclides associated with Site 50-006(d) are based on knowledge of historical operations at this Site and the results of soil and sediment sampling conducted under the Permittees’ Hazardous Waste Facility Permit and the Consent Order. Sampling results for Site 50-006(d), as reported in the Upper Mortandad Canyon Aggregate Area Investigation Report, Revision 1 (LA-UR-10-2046, April 2010),</p>



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		<p>show elevated activities of americium-241, plutonium-238, and plutonium-239/240, all of which are alpha-emitting radionuclides. Other alpha-emitting radionuclides (thorium-232, uranium-234, uranium-235/236, and uranium-238) were present at much lower activities, generally below background values. Based on the results for isotopic analyses reported under the Consent Order, alpha contamination associated with Site 50-006(d) appears to consist primarily of americium and plutonium isotopes, which is also consistent with Site history. As noted in the alternative compliance request, americium and plutonium isotopes are excluded from the definition of adjusted gross-alpha radioactivity under the Atomic Energy Act exclusion in the Clean Water Act.</p> <p>Although excluded from the IP, discharge of exempted radionuclides is regulated by DOE under DOE Order 458.1, which establishes Derived Concentration Standards (DCSs) for radionuclides in water. Discharges of radionuclides at Site 50-006(d) are monitored for compliance with DOE Order 458.1 and meet DCSs.</p>
	9. CCW questions the technical assumptions made by the Permittees to develop the alternative compliance request.	See response to Specific Comment V.B.7.
	10. CCW has expressed its concern that the alternative compliance request did not mention the permeable reactive barrier below Outfall 051.	The installation of the permeable reactive barrier (PRB) was implemented under Consent Order requirements. The PRB is not used as a best management practice under the Individual Permit and is not relevant of the alternative compliance request for Site 50-006(d).
	11. CCW has requested a reference regarding the scheduled date for Consent Order investigation sampling and soil removal.	The last Consent Order document related to Site 50-006(d) submitted to NMED is the Phase II Investigation Work Plan for Upper Mortandad Canyon Aggregate Area, Revision 1 (LA-UR-11-2486, May 2011), approved by NMED on May 24, 2011. This work plan recommended additional sampling to define the extent of contamination at Site 50-006(d). Since that work plan was approved, LANL has performed additional evaluations of the Site data as part of a supplemental investigation report (SIR) for Upper Mortandad Canyon, currently in preparation. Based on these evaluations, LANL recommended additional soil removal activities, which will be presented in the SIR. The referenced schedule is an estimate and will be refined once the SIR is submitted and approved.

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	<p>12. CCW has expressed its concern about certificates of completion (CoCs) issued by NMED under the Individual Permit that have not been subject to a Class 3 permit modification process under the Consent Order.</p>	<p>NMED does not, as stated in CCW's Specific Comment V.B.12, issue CoCs under the Individual Permit. NMED does, however, issue CoCs under the Consent Order. Part I.E.2(d) states that a CoC with or without controls issued by NMED under the Consent Order may be used by the Permittees to certify corrective action complete under the Individual Permit.</p> <p>The Class 3 permit modification provision referenced by CCW is found in the Consent Order in Section III.W.3.b, "Class III Permit Modification for Corrective Action Complete." This process is not related to the Individual Permit and is not relevant to certifying completion of corrective action under Part I.E.2(d) of the Individual Permit.</p> <p>The Class 3 permit modification provision referenced by CCW allows the Permittees to initiate a Class III permit modification of the Laboratory's Hazardous Waste Facility Permit to remove the SWMU or SMWUs that are the subject of the Permit modification request from the list of SMWUs requiring corrective action to one of the following two lists in the Hazardous Waste Facility Permit: "Corrective Action Complete with Controls" or "Corrective Action Complete Without Controls."</p>
	<p>13. CCW requested information on how the alternative compliance request addresses DOE Order 458.1, "Radiation Protection of the Public and the Environment."</p>	<p>This alternative compliance request does not address DOE Order 458.1, "Radiation Protection of the Public and the Environment," because the Individual Permit does not apply to certain radionuclides, including, but not limited to, source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended.</p> <p>The DOE Order 458.1 is a protection standard based on exposure to receptors and to individuals. It is not based on contaminant concentrations in the environment. Because of the limited extent of stream flow, no drinking water systems on the Pajarito Plateau rely on surface-water supplies. Surface water analytical results for gross-alpha radioactivity and radium isotopes are also compared with the New Mexico Water Quality Control Commission (NMWQCC) standards for protection of livestock watering use, which is a designated use for surface water within the LANL boundary. Concentrations of gross-alpha radioactivity and radium isotopes in storm water are also compared with established Pajarito Plateau background concentrations. NMWQCC standards and Pajarito Plateau background values are not specific about exposure frequency or duration. Therefore, for screening purposes, single sample results are compared with numeric criteria for these analytes. It should be noted that the gross-alpha standard/screening level does not apply to source, special nuclear, or byproduct material regulated by DOE under the Atomic Energy Act of 1954.</p>

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		DOE has several other programs that provide information on the effects radiological operations may have on the environment. Some of the most visible activities include fly-over radiological surveys of the entire LANL property and the surrounding areas, including its borders with Los Alamos County, Bandelier National Monument, and the adjacent Pueblos. The maps generated by these surveys indicate that, the radiological exposures across LANL property are indistinguishable from the natural background contributors such as natural uranium and gross-alpha deposition from atmospheric fallout (DOE 2012, "An Aerial Radiological Survey of Los Alamos National Laboratory and Surrounding Communities," U.S. Department of Energy DOE/NV/25946-1619, September 2012).
C. Recommendations	1. It is CCW's contention that EPA should deny the Permittees' alternative compliance request.	Comment noted.
	2. It is CCW's contention that if EPA does not deny the alternative compliance request, EPA should request that the Permittees provide additional documentation in support of the request and put the amended request out for public comment.	See response to Specific Comment V.B.3.
	3. It is CCW's contention that if EPA approves this alternative compliance request, EPA should provide an opportunity for a public hearing.	See response to Specific Comment V.B.4.
	4. It is CCW's contention that if EPA approves this alternative compliance request, EPA should provide an opportunity for a pre-hearing meeting to attempt to resolve some of the issues raised in CCW's comments.	See response to Specific Comment V.B.4.
	5. CCW recommends additional sampling before any compliance decision is made and requests a site tour to review the representativeness of sampling locations.	See response to Specific Comment V.B.2.

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	6. CCW recommends that the Permittees continue to identify additional controls, including LID/green infrastructure, across the Site.	<p>The Individual Permit regulates point-source storm water discharges associated with industrial activities from specified Sites. As detailed in the M-SMA-7.9 alternative compliance request, the Permittees do not believe the Site is the source of the TAL exceedance, and, therefore, no Site-related engineered controls are necessary. Also see the response to Comment III. A, second row (page 4) of this response.</p> <p>The Individual Permit does not regulate storm water discharges associated with current conventional industrial activities at LANL or other forms of non-point run-on or runoff.</p>
	7. CCW recommends that the goal of meeting TALs be included in any final alternative compliance work plan.	The purpose of the alternative compliance provision in the Individual Permit is to provide a path forward when the corrective action “tools” in Part I.E.2(a) through (d) (individually or collectively) cannot achieve TALs. If EPA approves an alternative compliance request, the site-specific work plan will contain the requirements EPA has deemed necessary to be protective of water quality.
	8. CCW has made several recommendations regarding the content of future versions of the Individual Permit.	The discussion regarding future versions of the IP is beyond the scope of the alternative compliance request for Site 50-006(d).



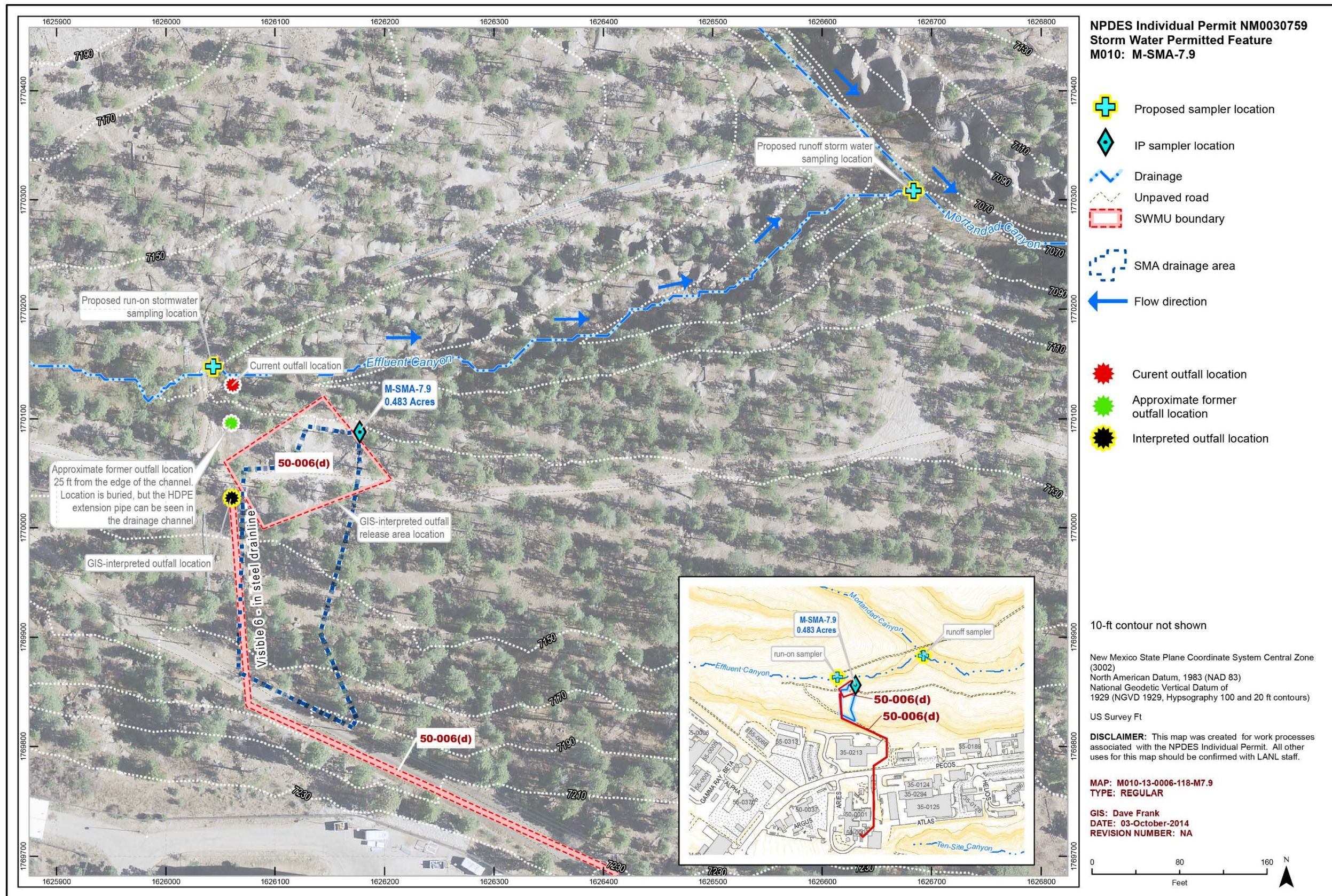


Figure 1 Location of the 50-006(d) RLWTF drainline

