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Waste Characterization Strategy Form

Project Title	**South Canyon Wells CdV-37-1i and R-27i**
Monitoring Wells	**CdV-37-1i and R-27i**
Activity Type	**Intermediate Aquifer Well Installation and Corehole Drilling**
Field Team Leader	**Mark Everett**
Waste Management Coordinator	**Victor Garde**
Completed by	**Jocelyn Buckley**
Date	**September 9, 2009**

Description of Activity:

The waste-generating activities addressed in this Waste Characterization Strategy Form (WCSF) consist of the installation (i.e., drilling, collecting chip and core samples, development, groundwater sampling and aquifer testing) of two intermediate perched aquifer monitoring wells, CdV-37-1i located in Water Canyon at the convergence of Water and Cañon de Valle and R-27i located in Water Canyon 1 mile down-canyon from CdV-37-1i. See Figures 1 and 2 for the map of well locations.

The following waste streams are anticipated for all wells:

- Waste Stream #1-Contact Waste
- Waste Stream #2-Drill Cuttings
- Waste Stream #3-Drilling Fluids
- Waste Stream #4-Development Water
- Waste Stream #5-Decontamination Fluids
- Waste Stream #6-Municipal Solid Waste (MSW)
- Waste Stream #7-New Mexico Special Waste (NMSW)
- Waste Stream #8-Drilled out Concrete Chips or Concrete Slurry

The initial management of each waste stream will be based upon existing acceptable knowledge (AK) data/documentation or by direct sampling of the IDW. Based upon previous AK documentation, the waste streams generated at R-27i and CdV-37-1i will initially be managed as hazardous waste, as there is a potential solvent source identified upstream of both wells from activities conducted within TA-16. A final waste determination will be made within 45 days from the date of generation (i.e., initial placement in the container) so that if the waste is determined to be hazardous, it can be managed expeditiously. Returned samples and associated PPE may be included with a waste stream at the time of disposal, if appropriate.

Every effort will be made to recycle or reuse contact waste, concrete chips, and concrete slurry, if determined to be non-hazardous, non-radioactive.

All wastes will be managed in accordance with P-409, *Waste Management*, EP-ERSS-SOP-5022, *Characterization and Management of Environmental Restoration Project Waste*, P-930-1, *LANL Waste Acceptance Criteria*, P-930-2, *Waste Certification Program*, and approved Work Plans.

Relevant Site History and Description:

R-27i - Intermediate well R-27i is being installed to monitor perched groundwater beneath Water Canyon that was encountered during the drilling of R-27 in October 2005. Perched water at R-27/R-27i could carry contaminants from either TA-16 or TA-49. Contaminants from TA-16 are dominantly high explosive compounds, barium, chlorinated solvents, tritium, boron and perchlorates. Contaminants from TA-49 are possibly explosive compounds (TNT, RDX, HMX, barium nitrate), radionuclides (Plutonium [Pu], Americium [Am], and Uranium [U]), Lead (Pb), and minor amounts of Berillium (Be). Waste generated from R-27i will initially be managed based upon the analytical data associated with R-27 and historical documentation associated with investigation activities conducted within TA-16. Since there is a potential for F-listed solvent contamination at well R-27i, the IDW will be initially handled as hazardous waste.

CdV-37-1i - Intermediate well CdV-37-1i is being installed to fulfill one of the requirements set forth in New Mexico Environment Department (NMED) Notice of Disapproval, South Canyons Work Plan, Los Alamos National Laboratory (NM0890010515, HWB-LANL-06-018). This well will provide a sampling point for a possible perched zone near the confluence of Water Canyon and Cañon de Valle. Additionally, an adjacent corehole will be advanced to 300 ft, or auger refusal, to collect samples for contaminant analyses. Perched intermediate groundwater at CdV-37-1i may contain contaminants from TA-16 and other up-gradient sources. Infiltration of surface water and alluvial groundwater may transport soluble contaminants such as high explosive compounds, tritium, and perchlorate to deeper perched intermediate groundwater beneath the canyon floor. Waste generated from CdV-37-1i will initially be managed based upon the analytical data associated with R-27, R-27i, and historical documentation associated with investigation activities conducted within TA-16. Since there is a potential for F-listed solvent contamination at well CdV-37-1i from TA-16 activities, the IDW will be initially handled as hazardous waste.

CHARACTERIZATION STRATEGY

The characterization strategy for investigation derived waste (IDW) generated during well installation is based upon direct sampling of the containerized waste and acceptable knowledge (AK) data/documentation associated with well location (i.e., within or near an Area or Concern [AOC] or Solid Waste Management Unit [SWMU]). AK includes review of existing analytical (i.e., soil, sediment, cuttings, groundwater, etc.) data in the vicinity of the wells, historical documentation associated with nearby AOCs or SWMUs, and may also include source term/process identification performed to identify whether listed hazardous waste may be present (i.e., due diligence reviews).

Based on the source descriptions in Relevant Site History and Description, there is a potential for F-listed solvent sources from TA-16 activities at regional wells R-27i and CdV-37-1i. The IDW from these wells may also be designated as radioactive and may contain high explosive compounds. Radioactive wastes do not need to be placed in radioactive waste staging or storage area until analytical data are available that shows that the waste is radioactive and can not be land applied. Unless otherwise noted, IDW from these two wells will initially be handled as hazardous wastes. Waste determinations will be made in a timely manner so that if the waste is determined to be hazardous, radioactive, mixed low-level, or contain high explosives, it can be managed expeditiously.

If analytical data or AK documentation indicate the presence of listed constituents that are not associated with a listed source, a due diligence review of available documentation may be performed to support the position that the constituents are not from a listed source (i.e., a listed process or spill or disposal of an unused/unspent chemical). If the due diligence does not identify a listed source, the waste will not carry the listed waste number. If a listed constituent is identified and is from a listed source, but the levels are below groundwater standards or soil screening levels and land disposal restrictions (LDRs), a "contained-in" request may be made to New Mexico Environment Department (NMED) in order to remove the listed

waste number from the waste stream. A copy of either the ENV-RCRA approved due diligence or the NMED "contained-in" approval must accompany all waste profiles prepared for the subject waste(s).

An amendment to this strategy form will be prepared and submitted for review and approval if any of the waste streams change in description or characterization approach or unanticipated waste streams are generated. The generation of no path forward wastes must be approved by Department of Energy (DOE) prior to generation of the waste.

Investigation activities will be conducted in a manner that minimizes the generation of waste. Waste minimization will be accomplished by implementing the most recent version of the "Los Alamos National Laboratory Hazardous Waste Minimization Report" (LANL 2008, 104174). Waste streams will be recycled/reused, as appropriate.

Waste #1: Contact Waste- This waste stream is comprised of solid waste generated during well installation activities that has come into contact with contaminated environmental media and equipment. This includes, but is not limited to: PPE (primarily gloves); plastic sheeting (e.g., tarps and liners); plastic and glass sample bottles; disposable sampling supplies (e.g., filters, tubing, plastic bags); and dry decontamination wastes, such as paper items. It is estimated that less than 1 cubic yard of contact waste may be generated per well.

Anticipated Regulatory Status: Green is Clean, LLW, Hazardous, MLLW, Industrial, and Solid (Municipal)

Characterization Approach: Contact IDW will be characterized using acceptable knowledge (AK) of the environmental media (i.e., drill cuttings and drilling fluids) or decontamination fluid with which it came into contact.

Storage and Disposal Method: Contact waste other than pit liners will initially be stored in a satellite accumulation area (SAA) to avoid exceeding 90-day accumulation limits. Based upon final waste determinations, the wastes will be managed in waste accumulation areas appropriate for the regulatory status of the waste. Note: If approval is granted by ENV-RCRA, nonhazardous/nonradioactive contact waste may be recycled or reused via the Material Recycling Facility (MRF).

Waste # 2: Drill Cuttings – This waste stream is comprised of borehole cuttings and core, soil, and rock sediments produced from drilling. The cuttings may or may not contain residue of drilling additives. It is estimated that 40 cubic yards of drill cuttings may be generated per well.

Anticipated Regulatory Status: LLW, Hazardous, MLLW, Industrial, and Solid (Municipal)

Characterization Approach: Waste characterization will be based upon the analytical results obtained from the direct sampling of the cuttings. A representative sample of the cuttings will be taken within 10 days of well completion. A waste determination will be made within 45 days of waste generation (i.e., the date the cuttings were removed from the pit and first placed into a container, or the date of initial placement into an approved container). A 21-day turnaround time will be requested for analysis.

Storage and Disposal Method: Drill cuttings will initially be stored in lined pits within the project controlled area at each well pending review of analytical results to determine final waste characterization. Specifications for the cuttings pit will be in accordance with the approved Storm Water Pollution Prevention Plan. Based on the analytical data, drill cuttings will be evaluated for land application in accordance with ENV-RCRA-SOP-011.1, *Land Application of Drill Cuttings*. If the cuttings meet the criteria for land application, the pit liner will be removed and managed as contact waste and the drill cuttings will be land applied in accordance with the procedure. If analytical data show the cuttings are hazardous wastes that meet all of the land application criteria, they will be left in the pit pending a "contained-in" approval from the New Mexico Environment Department. Any wastes that cannot be land applied will be excavated, containerized, and placed in an accumulation area appropriate for the regulatory classification of the waste. Wastes with a 90-day accumulation limit (NMSW or hazardous

waste) will be sent to an authorized facility for treatment, storage, or disposal within 90-days of containerization.

Waste # 3: Drilling Fluids – This waste stream is comprised of potable water, from a municipal water well, that is introduced into and retrieved from the borehole during drilling; mixing with groundwater may occur if water bearing formations are encountered. It is estimated that 20,000 gallons of drilling fluids may be generated from each well.

Anticipated Regulatory Status: LLW, Hazardous, MLLW, and Industrial

Characterization Approach: Waste characterization will be based upon the analytical results obtained from the direct sampling of the drilling fluids. A representative sample of the fluids will be taken within 10 days of well completion. If for any reason drilling fluids cannot be placed in pits, they will be containerized and sampled representatively as they are containerized. A waste determination will be made within 45 days of waste generation (i.e., the date the fluids were removed from the pit and first placed into a container, or the date of initial placement into an approved container). A 21-day turnaround time will be requested for analysis.

Storage and Disposal Method: Drilling fluids will initially be stored in lined pits pending review of analytical results to determine final waste characterization. If, for any reason, the fluids cannot be placed in pits, they will be containerized and stored in a less than 90 day accumulation area as hazardous waste, pending analysis. Based on the analytical data, drilling fluids will be evaluated for land application in accordance with ENV-RCRA-SOP-10.1, *Land Application Groundwater*. If the drilling fluids meet the criteria for land application, it will be land applied in accordance with the procedure. If analytical data show the fluids are hazardous wastes that meet all of the land application criteria, they will be left in pit or the container, for containerized fluids, pending a "contained-in" approval from the New Mexico Environment Department. Any wastes that cannot be land applied will be managed and disposed of based upon the regulatory classification of the waste. Wastes with a 90-day accumulation limit (NMSW or hazardous waste) will be sent to an authorized facility for treatment, storage, or disposal within 90 days of containerization.

Waste #4: Development Water- This waste stream consists of groundwater generated during development of the well and aquifer testing. The anticipated volume of development water that will be generated is approximately 20,000 gallons per well.

***Anticipated Regulatory Status*:** LLW, Hazardous, MLLW, and Industrial

Characterization Approach: Waste characterization will be based upon the analytical results obtained from the direct sampling of containerized waste. A representative sample will be taken within 10 days of generation (i.e., date of initial placement into the container) so that a waste determination can be made within 45 days of generation and wastes dispositioned within 90 days, if necessary. To collect a representative waste sample either a composite sample will be collected after well development or sample aliquots will be collected periodically during development and stored in a clean 55-gallon drum. Samples will be submitted with a 21-day turnaround time for analyses.

Storage and Disposal Method: Development water will be containerized at the point of generation and initially managed in a less than 90 day accumulation area as hazardous waste, pending analysis. If appropriate, and based on the analytical data, the development water will be evaluated for land application in accordance with ENV-RCRA-SOP-10.1, *Land Application of Groundwater*. If the development water meets the criteria for land application, it will be land applied in accordance with the procedure. If analytical data show the development waters are hazardous wastes that meet all of the land application criteria, they will be left in the container, pending a "contained-in" approval from the New Mexico Environment Department. Any wastes that cannot be land applied will be managed and disposed of based upon the regulatory classification of the waste. Wastes with a 90-day accumulation limit (NMSW or hazardous waste) will be sent to an authorized facility for treatment, storage, or disposal within 90 days of generation (i.e., initial placement in the container).

Waste #5: Decontamination Water - Consistent with waste minimization practices, the Laboratory employs dry decontamination methods to the extent possible. However, if dry decontamination cannot be performed, liquid decontamination is used. Decontamination water consists of liquid wastes generated from the decontamination of excavation, sampling, and drilling equipment. It is estimated that approximately 500 gallons of decontamination water will be generated from each well.

Anticipated Regulatory Status: LLW, Hazardous, MLLW, and Sanitary Wastewater

Characterization Approach: Decontamination water used on down hole equipment and materials will be characterized using acceptable knowledge (AK) of the media with which is came into contact. All other decontamination water generated from this project will be characterized by direct sampling of the containerized waste. The characterization approach for decontamination water used on down hole equipment and materials may be augmented, as needed, by direct sampling of containerized waste to fulfill a treatment, storage, or disposal facility's waste acceptance criteria (WAC). A representative sample will be taken within 10 days of generation (i.e., date of initial placement into the container) so that a waste determination can be made within 45 days of generation and wastes dispositioned within 90 days, if necessary. Decontamination water used on drilling equipment and materials prior to going down hole, or used on frac tanks prior to storage of IDW, will be characterized by direct sampling of the containerized waste. Samples will be submitted with a 21-day turnaround time for analyses.

Storage and Disposal Method: Decontamination water used on down hole equipment and materials will be containerized at the point of generation and managed in a <90-day accumulation area as hazardous waste, pending analysis. All other decontamination water (i.e., fluids from decontaminating "clean" equipment brought on-site) generated will be containerized and managed as non-hazardous waste, pending analytical results from direct sampling. The decontamination waters that are initially managed as nonhazardous, pending analytical results from direct sampling, will include the date of generation (i.e., date of initial placement in the container) on the nonhazardous waste label, as well as the generator's name and container contents. Nonhazardous/nonradioactive decontamination water may be disposed of on-site at the Sanitary Wastewater Treatment Facility if WAC requirements are met. If the waste is hazardous, LLW, or MLLW, it will be managed as such and treated and/or disposed of at an authorized facility.

Waste #6: Municipal Solid Waste (MSW) – This waste stream primarily consists of non contact trash, including, but not limited to paper, cardboard, wood, plastic, food and beverage containers. It is estimated that 20 cubic yards of MSW will be generated for each well.

Anticipated Regulatory Status: MSW

Characterization Approach: MSW will be characterized based on acceptable knowledge.

Storage and Disposal Method: MSW will be segregated from all other waste streams. It is anticipated that the waste will be stored in plastic trash bags or other appropriate containers and transferred/disposed of at an authorized facility.

Waste #7: New Mexico Special Waste (NMSW): Petroleum Contaminated Soils (PCS), Spilled Chemical Substance or Commercial Product, or Regulated Asbestos Waste (potential) - NMSW may be generated from the accidental release of commercial products such as hydraulic fluid, motor oil, unleaded gasoline, or diesel fuel (e.g. from the rupture of hydraulic or fuel hoses, or spills during maintenance, etc.), spills of chemicals or products used during project operations (e.g. drilling fluid additives) onto the ground, or regulated asbestos wastes generated during project activities. This may also include absorbent padding, paper towels, spill pillows or other absorbent material used to contain the released material. It is estimated that 500 gallons of this waste stream will be produced per well.

Anticipated Regulatory Status: LLW, New Mexico Special Waste, and Industrial

Characterization Approach: NMSW will be characterized based on acceptable knowledge using the MSDS and/or direct sampling. PCS will be sampled in place and analyzed for TPH (DRO/GRO), VOCs, and total lead within 10 days of the spill occurrence. Other analyses may be required if the spill was on a PRS or radioactively contaminated area. Samples will be submitted with 21-day turnaround time for analysis so that a waste determination can be made within 45 days of generation.

Storage and Disposal Method: NMSW will be managed in approved containers, staged in a designated NMSW storage area and disposed of at an authorized NMSW facility. If analytical results are below NMSW standards, waste will be managed as non-NMSW PCS and disposed of at an approved industrial waste facility. If the waste is being managed as NMSW, the date of generation (i.e., the date the container is completely full or the date no additional waste will be added to the container), will be included on the NMSW label, as well as the generator's name and container contents. If the waste is initially managed as NMSW, pending analytical results, the words *NMSW Pending Analysis* will be placed on the NMSW label, as well as the date of generation, the generator's name, and container contents. NMSW will be transported to an authorized NMSW facility within 90 of the generation start date.

Waste #8: Drilled-out Concrete Chips and Concrete Slurry- This waste stream consists of concrete chips from drilling out plug used to seal off perched groundwater or stabilize the borehole to facilitate drilling. It is estimated that 20 cubic yards of drilled out concrete chips or concrete slurry may be generated per well.

Anticipated Regulatory Status: Hazardous, LLW, Municipal Solid Waste, and Industrial

Characterization Approach: The concrete waste will be characterized based on AK from the MSDS for the cement and/or the surrounding soil. If concrete is generated from within a potential release site (PRS), and AK data/documentation is not available, a total metal analysis will be used to determine if the material can be recycled or reused. Additional sampling may be required depending on contaminants of concern in a PRS or the presence of radionuclides. A representative sample will be taken within 10 days of generation (i.e., date of initial placement into the container) so that a waste determination can be made within 45 days of generation and wastes dispositioned within 90 days, if necessary. Samples will be submitted with a 21-day turnaround time for analyses.

Storage and Disposal Method: Concrete waste will be managed in a roll-off container or other suitable container as nonhazardous, initially. If concrete is not contaminated, it may be sent to the county landfill for reuse but the waste must have ENV-RCRA approval for release. If it is contaminated, it must be managed as waste and managed appropriately. For concrete generated from within a PRS, analyses for total metal and contaminants associated with the PRS will be conducted to determine if the material can be recycled or reused if AK documentation is not available. Every effort will be made to recycle or reuse these materials, if possible.

TABLE 1- CHARACTERIZATION TABLE

Waste Description	Waste # 1 Contact Waste	Waste #2 Drill cuttings	Waste #3 Drilling Fluids	Waste #4 Development Water	Waste #5 Decontamination Fluids
Volume	<1 cy	40 cy	20,000 gal	20,000 gal	500 gal
Packaging	Drums or roll-off bins	Lined pit or approved containers	Lined pit or approved containers	Approved Containers	Approved Containers
Regulatory Classification					
Radioactive (rad)	X	X	X	X	X
Solid	X	X	—	—	—
Hazardous	X	X	X	X	X
Mixed (hazardous and rad)	X	X	X	X	X
Toxic Substances Control Act	—	—	—	—	—
New Mexico Special Waste	—	—	—	—	—
Industrial	X	X	X	X	—
Sanitary Wastewater	—	—	—	—	X
Characterization Method					
Acceptable knowledge (AK): Existing Data/Documentation	X	—	—	—	X
AK: Site Characterization	—	—	—	—	—
Direct Sampling of Containerized Waste	—	X	X	X	X
Analytical Testing					
Volatile Organic Compounds (EPA 8260-B)	—	X	X	X	X
Semi volatile Organic Compounds (EPA 8270-C)	—	X	X	X	X
Organic Pesticides (EPA 8081-A)	—	X	X	X	X
Organic Herbicides (EPA 8151-A)	—	X	X	X	X
PCBs (EPA 8082)	—	—	X	X	—
Total Metals (EPA 6010-B/7471-A)	—	X	X1	X1	X
Total Cyanide (EPA 9012-A)	—	X	X2	X2	X
General (NO3+NO2, F, Cl, SO4, TDS, pH, microtox/COD/TSS)	—	X (nitrates if land applied)	X	X	X3
Perchlorates	—	X	X	X	X
High Explosives Constituents (EPA 8330/8321-A)	—	X	X	X	—
Asbestos	—	—	—	—	—
BTEX (EPA-8021b)	—	—	—	—	
Tot. pet. hydrocarbon (TPH)-GRO (EPA 8015-M) TPH-DRO (EPA-8015-M)	—	X (if visible stain)	—	—	—
Toxicity characteristic leaching procedure (TCLP) Metals (EPA 1311/6010-B)	—	X	—	—	—
TCLP Organics (EPA 1311/8260-B & 1311/8270-C)	—	—	—	—	—
TCLP Pest. & Herb. (EPA 1311/8081-A/1311/8151-A)	—	—	—	—	—
Radium 226 & 228 (EPA 9320)	—	X	X	X	—
Gross Alpha (alpha counting) (EPA 900)	—	X	X	X	X
Gross Beta (beta counting) (EPA 900)	—	X	X	X	X
Tritium (liquid scintillation) (EPA 906.0)	—	X	X	X	X
Gamma spectroscopy (EPA 901.1)	—	—	X	X	X
Isotopic plutonium (chem. separation/alpha spec.) (HASL-300)	—	X	X	X	X
Isotopic uranium (chem. separation/alpha spec.) (HASL-300)	—	X	X	X	X
Total uranium (6020 inductively coupled plasma mass spectroscopy [ICPMS])	—	—	—	—	—
Strontium-90 (EPA 905)	—	X	X	X	—
Americium-241 (Separation/alpha spec.) (HASL-300)	—	X	X	X	—

TABLE 1- CHARACTERIZATION TABLE --CONTINUED

Waste Description	Waste #6 Municipal Solid Waste	Waste #7 NMSW/PCS	Waste #8 Concrete Chips and Concrete Slurry
Volume	20 cy	500 gal	20 cy
Packaging	Approved Containers	Approved Containers	Approved Containers
Regulatory classification			
Radioactive	—	X	X
Solid	X	—	X
Hazardous	—	—	X
Mixed (hazardous and radioactive)	—	—	—
Toxic Substances Control Act (TSCA)	—	—	—
New Mexico Special Waste	—	X	—
Industrial	—	X	X
Characterization Method	—		
Acceptable knowledge (AK): Existing Data/Documentation	—	X	X
AK: Site Characterization	X	X (rad only)	X
Direct Sampling of Containerized Waste	—	X	—
Analytical Testing	—		
Volatile Organic Compounds (EPA 8260-B)		X	—
Semivolatile Organic Compounds (EPA 8270-C)	—	X	—
Organic Pesticides (EPA 8081-A)	—	—	—
Organic Herbicides (EPA 8151-A)	—	—	—
PCBs (EPA 8082)	—	X	—
Total Metals (EPA 6010-B/7471-A)	—	—	—
Total Cyanide (EPA 9012-A)	—	X	—
General (NO3+NO2, F, Cl, SO4, TDS, pH, microtox/COD/TSS)	—	—	—
Perchlorates	—	—	—
High Explosives Constituents (EPA 8330/8321-A)	—	—	—
Asbestos	—	—	—
BTEX (EPA-8021b)	—	—	—
Total petroleum hydrocarbon (TPH)-GRO (EPA 8015-M) TPH-DRO (EPA 8015-M)	—	X	—
TCLP Metals (EPA 1311/6010-B)	—	X	—
TCLP Organics (EPA 1311/8260-B & 1311/8270-C)	—	X	—
TCLP Pest. & Herb. (EPA 1311/8081-A/1311/8151-A)	—	X	—
Radium 226 & 228 (EPA 9320)	—	—	—
Gross Alpha (alpha counting) (EPA 900)	—	X	—
Gross Beta (beta counting) (EPA 900)	—	X	—
Tritium (liquid scintillation) (EPA 906.0)	—	X	—
Gamma spectroscopy (EPA 901.1)	—	X	—
Isotopic plutonium (ihem.. Separation/alpha spec.) (HASL-300)	—	X	—
Isotopic uranium (ihem.. Separation/alpha spec.) (HASL-300)	—	X	—
Total uranium (6020 inductively coupled plasma mass spectroscopy [ICPMS])	—	—	—
Strontium-90 (EPA 905)	—	X	—
Americium-241 (ihem. Separation/alpha spec.) (HASL-300)	—	X	—

1-FILTERED METALS REQUIRED FOR LAND APPLICATION (EXCEPT HG)
2-FILTERED CYANIDE FOR LAND APPLICATION
3-ANALYZE FOR MICROTOX//COD/TSS

Note: Section 1.2 of the TCLP method 1311 states "If a total analysis of the waste demonstrates that individual analytes are not present in the waste, or that they are present but at such low concentrations that the appropriate regulatory levels could not possibly be exceeded, the TCLP need not be run." The methodology for using total waste analyses determination for the 40 TC constituents is as follows;

Liquids – Wastes containing less than 0.5% filterable solids do not require extraction and therefore by filtering the waste and measuring the total constituent levels of the filtrate and comparing those levels to regulatory levels is appropriate.

Solids – Constituent concentrations from the extraction fluid of wastes that are 100% physical solids are divided by 20 (reflecting the 20 to 1 ratio of TCLP extraction) and then compared to the regulatory levels. If the theoretical levels do not equal or exceed the regulatory levels, the TCLP need not be run. If the levels do equal or exceed the regulatory levels, the generator may either declare the waste hazardous or run TCLP analyses

References

P-409, *Waste Management*
ADEP-SOP-5238, *Management of Environmental Program Waste* (September 2009)
ENV-RCRA-SOP-10.1, *Land Application of Groundwater* (May 2008)
ENV-RCRA-QP-11.1, *Land Application of Drill Cuttings* (August 2008)

Waste Characterization Strategy Form

Signatures	Date
WES-RS Project Leader (Print name and then sign below.) Mark Everett	9-9-09
WES-WA Waste Management Coordinator (Print name and then sign below.) Victor Garde Lacey Baker For Victor Garde 9/9/09	09-09-09
ENV-RCRA Representative (Print name and then sign below.) Jocelyn Buckley	9/9/09
WES-WA Representative (Print name and then sign below.) Jose D. Ortega	9/9/09

	Los Alamos National Laboratory **ENV-ERSS**

FIGURE 1

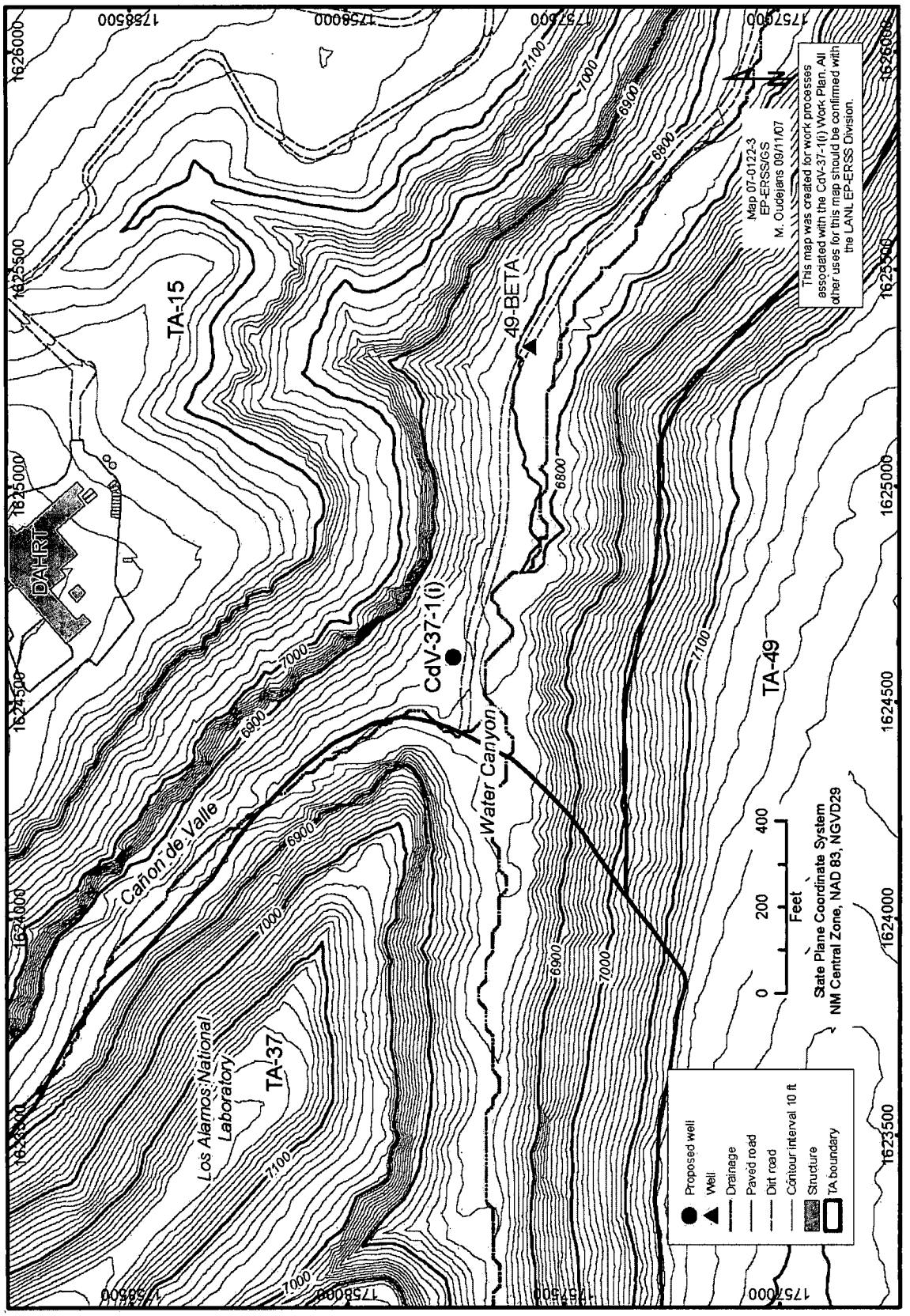

Figure 1 Location of CdV-37-1i

FIGURE 2

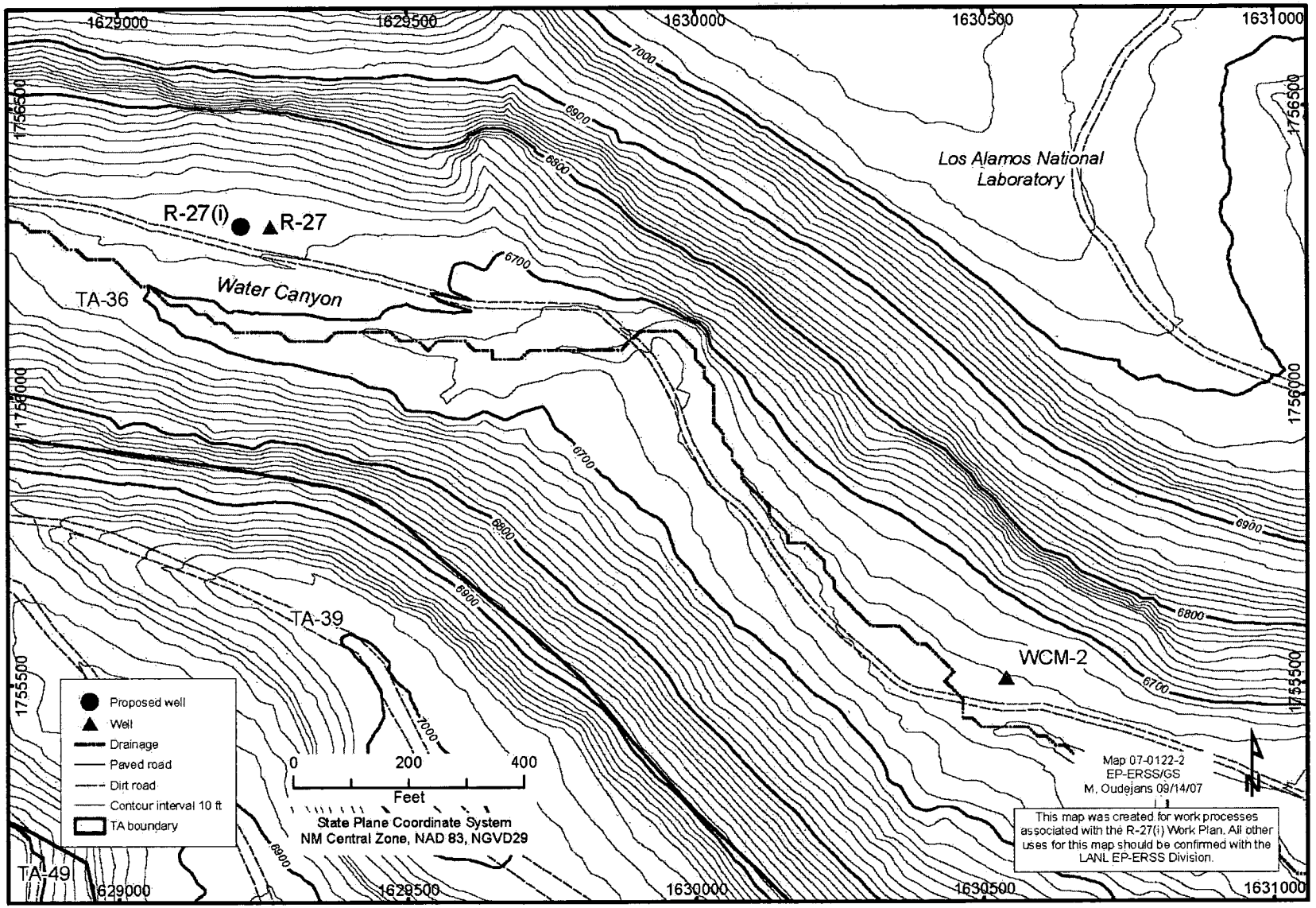

Figure 1 Location of R-27i