

## Roles, Gary W.

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**From:** Marcus Dufort [REDACTED]  
**Sent:** Wednesday, May 07, 2014 5:58 PM  
**To:** Roles, Gary W.  
**Cc:** Justin Fellhauer  
**Subject:** RE: SSFL D&D EIS information  
**Attachments:** Chiquita Canyon Guidelines 2013.pdf

Gary,

It was great talking with you last week. I apologize for the delay. I've reviewed the SSFL Chemical Lookup tables you provided and found everything to be within the acceptable limits for disposal at Chiquita Canyon Landfill. Looking at Table 1 in your email, the waste categories our facility are willing to accept include Trash, Contaminated soil (non-hazardous), and Demolition debris (non-hazardous). Unfortunately at this time we are not permitted to accept any liquids or semi-solid wastes (containing 50 % solids or less).

To further assist your evaluation, I've attached a copy of our Waste Acceptance Guidelines. You may refer to these for more information regarding soil testing, constituent limits, sampling frequency, approvals and acceptance procedures. I've also added our sales representative Justin Fellhauer to the chain for you to contact regarding pricing and logistics.

It's been a pleasure working with you. Please let me know if I can be of further assistance.

Best Regards,

**Marcus Dufort**  
Environmental Engineer  
Waste Connections, Inc.

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**From:** Roles, Gary W. [REDACTED]  
**Sent:** Thursday, May 01, 2014 10:19 AM  
**To:** Marcus Dufort  
**Subject:** SSFL D&D EIS information

Marcus!

Thanks for taking my call.

I am contacting you for any information that you can hopefully provide regarding the acceptance of waste for disposition at your site.

Leidos is participating in preparation of an environmental impact statement (EIS) for the U.S. Department of Energy addressing alternatives for remediation of a portion of the Santa Susanna Field Laboratory (SSFL) in Simi Valley, CA. This EIS will address remediation of the Energy Technology Engineering Center (ETEC) at SSFL, where remediation will principally involve remediation of contaminated soil and decontamination and demolition of structures. Remediation of the remaining portion of SSFL is the responsibility of the NASA, which has already issued an EIS for this activity. In addition, the State of California plans to issue its own environmental document addressing the entire SSFL.

Based on agreements with the State of California, ETEC will be cleaned to background concentrations, where background concentrations are to be determined for chemicals by use of a look-up table established by the California DTSC. (Look-up table values for over a hundred chemicals are attached. Look-up values for additional chemicals may be developed.)

Remediation of ETEC alone may result in generation of very large volumes of contaminated soil and rock (up to 1.7 million cubic yards) and much smaller volumes of demolition debris. Common chemical contaminants that will be addressed during soil cleanup include PCBs, PAHs, petroleum hydrocarbons, and metals such as lead, mercury, or silver. **Table 1** summarizes the projected waste categories that may require offsite shipment, plus projected disposition pathways (e.g., landfill, recycle). At this time we expect two principal categories of contaminated soil: soil that would be classified as hazardous under California requirements, and soil that would not be classified as hazardous, but would contain chemicals in concentrations that exceed the required look-up values. Thus, there could be large quantities of soil that are only very slightly contaminated. Similarly, there may be soil that contains radionuclides as well as regulated chemicals (either in hazardous or nonhazardous concentrations). Other waste streams include ordinary trash, demolition debris either clean or contaminated with radionuclides, and hazardous waste from demolition activities (e.g., lead, PCB light ballasts, asbestos) that may or may not be contaminated with radionuclides. (It is expected that most of the hazardous waste from building demolition will be asbestos.) Finally, some possible soil remediation methods could generate a contaminated wastewater stream that will require offsite disposition.

**Table 1. Principal SSFL Waste Categories Requiring Offsite Shipment**

Waste Category	Typical Materials	Projected Disposition
Trash	Paper, plastic, food or drink cans	Class III landfill, recycle
Contaminated soil (nonhazardous)	Soil, rock	Class II or Class III landfill, depending on acceptance criteria
Demolition debris (nonhazardous)	Asphalt, concrete steel, wires, cable, machinery	Inert or Class III landfill, depending on acceptance criteria, recycle
Contaminated soil (hazardous)	Soil, rock	Class I landfill
Contaminated demolition debris (hazardous)	Lead, lead-based paint, mercury switches, asbestos or asbestos-containing material, PCB light ballasts.	Class I landfill
LLW – soil with radioactive material only	Soil, rock	LLW or MLLW disposal facility
MLLW – soil with radioactive and hazardous material in any concentrations	Soil, rock	MLLW disposal facility
LLW – demolition debris with radioactive material only	Asphalt, concrete steel, wires, cable, machinery	LLW or MLLW disposal facility
MLLW – demolition debris with radioactive and hazardous material	Lead, lead-based paint, mercury switches, asbestos or asbestos-containing material, PCB light ballasts.	LLW or MLLW disposal facility
Wastewater from soil treatment	Contaminated water	

LLW = low-level radioactive waste; MLLW = mixed low-level radioactive waste; PCB = polychlorinated biphenyl.

Additional information about ETEC decommissioning, the EIS, and other background information such as environmental sampling data is at [www.etc.energy.gov](http://www.etc.energy.gov).

No decisions have been made about where any waste from ETEC remediation could be sent. What we are trying to do at this time is to scout for candidate sites for the various waste categories, and develop an information base for the candidate sites in terms of: (1) the types of services provided (e.g., disposal, processing for disposal or recycle), (2) materials accepted (and not accepted) for disposition, and (3) remaining landfill capacities. This type of information would be used to help make assumptions for purposes of environmental analysis, such as the environmental impacts associated with waste transportation. (These impacts differ, for example, based on population densities along the transportation routes and the distances the materials are transported.) Basically, the intent is to provide a summary of as much information as possible in a table such as **Table 2**. We drafted this table based on publicly available information (e.g., internet searches),

but are unsure regarding its completeness and accuracy. Regarding the listed (and incomplete) estimates of remaining landfill capacities, we summarized information as available from the CalRecycle web site, but the information is dated.

**Table 2. Example Waste Treatment and Disposal Facilities**

Site <sup>a</sup>	Location	Approximate Distance (miles)	Waste Types Accepted and Services	Approximate Remaining Landfill Capacity
<i>California-Based Nonradioactive Treatment and Disposal Facilities</i>				
Chiquita Canyon Sanitary Landfill (Waste Connections, Inc.)	Castaic, CA	32	Class III landfill. Accepts municipal solid waste, green materials for composting or recycling, construction and demolition debris, inert waste, and nonhazardous soil. Services include recycle of green waste, asphalt and concrete, and metal.	22,400,000 cubic yards as of 3/31/2010.

We understand that Waste Connections operates a facility near SSFL that might be suitable for some waste categories – i.e, the Chiquita Canyon Landfill at Castaic, CA, which we thought may be considered for wastes such as lightly contaminated soil, uncontaminated demolition debris, or general office refuse. We were hoping that you could assist us in accurately completing this table, making note of any important restrictions or limitations. (For example, are there restrictions on plant matter accompanying nonhazardous waste soil?) If you believe that that the facility would be unsuitable for nonhazardous but still regulated material (e.g., slightly contaminated soil), we would appreciate you're informing us, or any treatment requirements based on land disposal restrictions that may be required before the waste could be received. We would also greatly appreciate any suggestions you may have for other Waste Connections sites, if any, that may be suitable for any of the waste categories. For example, some wastewaters contaminated with hazardous constituents may be generated that would require management.

Thank you very much for any assistance that you can provide. I can be reached at the above email address or by telephone [REDACTED]. I am in and out of the office, and use of email or my cell could avoid telephone tag.

Best regards.

Gary

**Gary W. Roles | Leidos**  
Nuclear Engineer



| [leidos.com/engineering](http://leidos.com/engineering)



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**Waste Connections, Inc.  
Chiquita Canyon Landfill**

**WASTE ACCEPTANCE GUIDELINES  
May 2013**

**ACCEPTANCE PROCEDURES**

The following information summarizes acceptance procedures for the Chiquita Canyon Landfill:

- Assist in determining Chiquita Canyon Landfill required laboratory analysis (or contact the landfill directly),
- Complete a "Special Waste Profile" (supplied by Chiquita Canyon),
- Submit completed Special Waste Profile, required chemical laboratory analyses, Chain of Custody and other required documentation to Chiquita Canyon,
- Obtain approval from Chiquita Canyon. *Note:* more information may be required upon review of material,
- Set up method of payment prior to transport of material, and
- A Waste Connections manifest will be generated upon approval and sent to transporter, each truck must have a manifest, signed by the Generator prior to arriving at the landfill. These manifests are utilized for tracking purposes when the shipment arrives at the landfill.

**Note: Per Executive Order No. D-62-02 issued on September 30, 2002 by Governor Gray Davis, decommissioned materials and/or residual radioactive materials are not allowed for management.**

**ACCEPTANCE CRITERIA - *Laboratory Analysis***

**Petroleum Contaminated Soils**

Product specific knowledge can be utilized to determine the appropriate analytical requirements for petroleum contaminated soils. Below is a list of petroleum hydrocarbons that are typically released, and the analyses that may address the regulated compounds under CCR Title 22 and 40 CFR.

Unleaded Gas:	TPH (8015M), BTEX
Leaded Gas:	TPH (8015M), BTEX (8015B/8021B), Lead (TTLC)
Kerosene:	TPH (8015M), BTEX, Sulfide, Sulfate
Jet Fuel:	TPH (8015M), BTEX, Lead (if leaded product), Sulfide, Sulfate
Diesel:	TPH (8015M), BTEX
Used Hydraulic Oil:	TPH (8015), BTEX, (8015B/8021B), 8270, CAM 17, Sulfide, Sulfate
Bunker Oil:	TPH (8015), BTEX, LUFT 5 Metals (or MSDS), Sulfide, Sulfate
Virgin Motor Oil:	TPH (8015), BTEX, Sulfide, Sulfate
Used Motor Oil:	TPH (8015), BTEX, (8015B/8021B), 8270, CAM 17, Sulfide, Sulfate

\*Sulfides and sulfates on UST, manufacturing, or industrial locations only.

Waste Acceptance Guidelines – May 2013

Petroleum Contaminated Soils, Cont'd.

<u>Constituent</u>	<u>Sub-Title D Lined</u>
Volatile Organic Compounds:	50 mg/kg
Total Petroleum Hydrocarbons (Gasoline):	1,000 mg/kg weighted average
Total Petroleum Hydrocarbons (Diesel): (Also includes Kerosene and Jet Fuels)	10,000 mg/kg weighted average
Total Petroleum Hydrocarbons (Motor oil): (Also includes Hydraulic, Heating and Bunker Oils, and Stoddard Solvent)	50,000 mg/Kg weighted average

The following requirements also apply to managing TPH impacted soils:

V.O.C. Contaminated Soil:

Dry Cleaners: 8260, CAM 17 Metals, Sulfate, Sulfide

<u>Constituent</u>	<u>STLC (mg/L)</u>	<u>Total (mg/Kg)</u>
Benzene	0.34	3.40
Toluene	51	510
Ethyl benzene	238	2,380
Xylene	595	5,950
Lead	5.0	1000.0

The characteristics of reactivity, corrosivity, ignitability, and aquatic toxicity are unlikely in petroleum contaminated soils below certain TPH levels. In certain instances, an RCI (Reactivity, Corrosivity, and Ignitability) may also be necessary.

Solvent Contaminated Waste

- If the contaminant is known, run the method(s) which target that contaminant.
- If specific contaminant is unknown, run the full 8260 analysis.
- Must address any RCRA (K, U, P or F codes) or TSCA listings, in writing.
- Metals, RCI, and/or Semi-volatile (8270), among other analyses may also be required depending on the nature of the contaminants or the process generating the waste.

NO WWTP Sludge / Biosolids

Industrial Waste Streams:

Utilizing the generator's description and knowledge of the waste stream, as well as accompanying analyses, the Chiquita Canyon will determine the required testing and frequency of sampling. In addition, the waste stream must not exhibit any of the hazardous characteristics of reactivity, corrosivity, ignitability, or toxicity.

**Frequency**

Representative samples are required for all incoming special waste streams. In general, a four point composite sample (four individual grab samples composited at the laboratory into one equally represented sample) is required to satisfy the requirements for a "representative" sample.

CONTAMINANTS	PROTOCOL	
	Volume	Frequency
Petroleum Hydrocarbons (8015M)	1-1000 cubic yards	1- 4 Point Composite Sample.
VOC's (8015B/8021B), SVOC's (8270), Metals	1000+ cubic yards	1-4 Point Composite Sample plus one sample for each additional 1000 cubic yards.
Dry Cleaner V.O.C.'s (8260)	1-1000 cubic yards	1- 4 Point Composite Sample.
S.V.O.C.'s (8270) Pesticides (8080) Herbicides (8150) Metals (CAM 17) PCB's (8080)	1000+ cubic yards	1-4 Point Composite Sample plus one sample for each additional 1000 cubic yards.

**Analytical Review**

The following should be considered when submitting data from a California certified analytical laboratory to the Chiquita Canyon for review:

- The analytical data must be less than 12 months old.
- The analytical report must be legible, typed on the laboratory letterhead, include the address and phone number of the laboratory and signed by an authorized representative of the laboratory. Draft or preliminary reports will not be acceptable.
- The results must have been analyzed within required holding times.
- The results must also identify the units of measure and analytical method performed.
- Chain of custody documentation must be included in the analytical submitted for review.
- Laboratory Quality Assurance / Quality Control documentation must be presented with each analytical data set.
- For results reported as "non-detect," a detection or reporting level must be indicated. Laboratory detection limits must be less than regulatory thresholds.

**Constituent Limits: *Sub-Title D Lined Cell***

The Chiquita Canyon will only accept material that is represented by analytical results indicating concentrations below the listed values. The Chiquita Canyon will base approvals on total results where the total threshold limit concentration of a particular constituent does not equal or exceed 20 (TCLP dilution factor) or 10 (STLC dilution factor) times the listed soluble threshold for organic and inorganic compounds, respectively, except for Mercury. STLC Mercury values will be compared on an equivalent basis to TCLP criteria.

## Waste Acceptance Guideline – May 2013

### Metals Contaminated Wastes

Cell Acceptance Limits:

Metal	Sub-Title D TTLc (mg/Kg)	Sub-Title D STLC (mg/L)	Sub-Title D TCLP (mg/L)
Antimony	20.0	2.0	
Arsenic	50.0	5.0	5.0
Barium	1,000	100.0	100.0
Beryllium	8	0.75	
Cadmium	10	1.0	1.0
Chromium	50	5.0	5.0
Chromium +6	50	5.0	
Cobalt	800	80.0	
Copper	250	25.0	
Fluoride	1800	180	
Lead	1000	5.0	5.0
Mercury	2	0.2	0.2
Molybdenum	3,500	350.0	
Nickel	200	20.0	
Selenium	10	1.0	1.0
Silver	50	5.0	5.0
Thallium	6.8	1.0	
Vanadium	240	24.0	
Zinc	2500	250.0	

### Other Limits:

Moisture content must be: < 50% all other sources.

#### Toxicity:

- The waste has an acute oral LD50 < 5,000 mg/kg,
- The waste has an acute dermal LD50 < 4,300 mg/kg,
- The waste has an acute inhalation LC50 < 10,000 ppm, or
- The waste has an acute aquatic 96 hour LC50 < 500 mg/l.

Ignitability: Flash point > 60° C, or 140° F.

Corrosivity: pH between 2.0 and 12.5.

Asbestos: < 1.0 percent friable asbestos.

### Soils Reused as Alternative Daily Cover:

Materials are limited to less than 50 ppm of volatile organic constituents.