



Environmental Protection Division
Water Quality & RCRA Group (ENV-RCRA)
P.O. Box 1663, K490
Los Alamos, New Mexico 87545
(505) 667-0666/FAX: (505) 667-5224



Date: November 13, 2008
Refer To: ENV-RCRA-08-213

VIA HAND DELIVERY

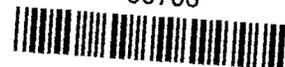
Ms. Rebecca Kay
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303

Dear Ms. Kay:

SUBJECT: SUPPLEMENTAL INFORMATION ON PROPOSED EXTENSION OF THE LOS ALAMOS NATIONAL LABORATORY SITE TREATMENT PLAN (STP) FISCAL YEAR 2007 (FY07) UPDATE AND REVISION 18.0 COMPLIANCE DATES

In a letter dated June 23, 2008, the National Nuclear Security Administration (NNSA)/Los Alamos National Security, LLC (LANS) requested extensions from the New Mexico Environment Department (NMED) for milestone activity compliance dates in the Los Alamos National Laboratory (LANL) Fiscal Year 2007 (FY07) Revision 18 Site Treatment Plan (STP). Information supporting the proposed extensions was provided in a signed affidavit by Charles (Chris) Duy and, in a detailed table with information on each treatability group and copies of email correspondence between Mr. Duy and various treatment facility representatives. In past correspondence, NMED required that NNSA/LANS provide five items of information for any proposed milestone activity compliance date extension. The five items are:

1. "A description of the waste in the treatability group(s);"
2. "A list of the EPA hazardous waste numbers associated with those wastes;"
3. "A description of the treatment processes required for the treatability group(s);"
4. "A full list of all commercial facilities the Respondents contacted requesting treatment and acceptance of the treatability group(s);"
5. "All correspondence, formal or otherwise, between the commercial facilities identified in item 4 above including the reasons for their denial of acceptance and treatment of the two treatability group(s)."



During an October 14, 2008 meeting between representatives of the NMED and LANS, NMED requested the information presented in the June 23, 2008 letter be reformatted and, where possible expanded into narrative form organized by STP Compliance Plan Activity number. Accordingly, NNSA/LANS submits the following information for each STP Section milestone activity.

I.) Section 3.1.8 Compressed Gases Requiring Scrubbing, Treatability Group LA-W917
Activity 3.1.8 (A) *“Complete shipping of existing wastes to an off- site treatment facility or complete parallel option”*. Current approved compliance date: August 28, 2008. Proposed Revision 18 compliance date: August 28, 2009.

1. Description of the waste in the treatability group:

Gas cylinders with internal radioactive contamination. Container number and volume (m³) currently in storage:

Gas cylinders with internal radioactive contamination

Container number	Volume (m ³)
C98100432	0.0020
C98100433	0.0030
C98100434	0.0030

2. List of the EPA hazardous waste numbers associated with the wastes
 D001

3. Description of the treatment processes required for the treatability group:

The treatment process for the waste stream consisting of gas cylinders with internal radioactive contamination involves scrubbing or oxidation of the cylinder and/or a reaction to strip and recycle tritium.

4. Full list of all commercial facilities the Respondents contacted requesting treatment and acceptance of the treatability group:

Commercial Facility ^{1,2}	Location	Contact Name	Contact telephone number	Comments
PermaFix	Florida	Stacey McNamara	865-599-0211	PermaFix also owns the following TSDFs: Material & Energy Corporation in TN; Diversified Scientific Services, Inc. in TN; and PermaFix North West in WA
		Tammy Monday	865-813-1309	

Waste Control Specialists	Texas	Sherrod Reavis	972-488-1495	
Energy Solutions of Utah	Utah	Jose Jerez	801-243-3506	
Bear Creek Operations	Tennessee	Jose Jerez	801-243-3506	Now owned by Energy Solutions
Nuclear Fuel Services	Tennessee	Norm Jacobs	423-743-2503	
Lawrence Livermore National Laboratory	California	Charley Hunt	925-422-3813	
Integrated Environmental Services	Tennessee	Jeff Gold	404-863-8175	
NSSI	Texas	Bob Gallagher	713-641-0391	

1. Also consulted with commercial and Department of Energy (DOE) facilities that have had previous successes with treating LANL waste including: the Idaho National Energy Lab's Waste Experimental Reduction facility (WERF), the Toxic Substances Control Act Incinerator at Oak Ridge (TSCAI), researchers here at LANL, American Radiation Services (ARS), Catholic University's Vitreous State Laboratory (CUA/VSL), Colorado Minerals Research Institute (CMRI), Nuclear Fuel Services (NFS), and Pacific Eco Solutions (PEcoS).

2. Also sought advice on treatment options from commercial and DOE facilities including: Oak Ridge National Laboratory, Nevada Test Site, Sandia National Laboratory, Hazen Research, StataG, Argonne/Chicago Office, and Portsmouth DOE Facility.

5. All correspondence, formal or otherwise, between LANS and the commercial facilities identified in item 4 above including the reasons for their denial of acceptance and treatment of the treatability group.

a) **Permafrix of Florida.** LANS has no written correspondence. Numerous telephone and personal contacts were made by the LANL Representative. Permafrix has declined to accept LANL waste because treatment options would involve building a special facility and Permafrix stated they are not interested in pursuing the necessary exceptions or changes to their Resource Conservation and Recovery Act (RCRA) Permit or Nuclear Regulatory Commission (NRC) license.

b) **Waste Control Specialists (WCS), Texas.** LANS has no written correspondence. Numerous telephone and personal contacts were made by the LANS representative. WCS has declined to accept LANL waste because doing so would require building a special facility to treat LANL waste and permit modifications and exceptions to its RCRA Permit or NRC license.

c) **Energy Solutions of Utah.** LANS has no written correspondence. Numerous telephone and personal contacts were made by the LANS representative. Energy Solutions declined to accept LANL waste because doing so would require building a special facility to treat LANL waste and permit modifications and exceptions to its RCRA Permit or NRC license.

d) **Bear Creek Operations in Tennessee.** LANS has no written correspondence. Numerous telephone and personal contacts were made by the LANS representative. Although Bear Creek Operations has recently obtained a new RCRA Permit that allows them to treat wastes, developing a process and issuing a cost for bid would take six months to a year. If in the development process, Bear Creek determines that a Permit Modification will be necessary to treat the LANL waste, they have indicated they will decline to treat LANL waste.

e) **Nuclear Fuel Services (NFS), Tennessee.** LANL has no written correspondence. Numerous telephone and personal contacts were made by the LANL Representative. Nuclear Fuel Services has declined to accept LANL waste because the waste is not compatible with their RCRA Permit (gas cylinders are not part of the RCRA Permit) or NRC license.

f) **Lawrence Livermore National Laboratory (LLNL), California.** An email correspondence dated April 2, 2008 from Charles Hunt of LLNL states that they are unable to accept any LANL waste in 2008.

g) **Integrated Environmental Services (IES), Tennessee.** LANL has no written correspondence. Numerous telephone and personal contacts were made telephone/personal contacts made by the LANL representative. IES does not have a RCRA Permit, but they have indicated they may possibly collaborate and do a treatability study by working through Permafrix. If no other treatment options are available (with facilities that are permitted and the capability in place), LANL will explore the use of IES once they are approved to accept DOE waste.

h) **NSSI, Texas.** NSSI has shown interest in this waste stream. However, no waste has been shipped from LANL to NSSI in over ten years, and an approved audit of the facility would have to be performed to meet the requirements of DOE Order 435.1, which governs management of DOE radioactive waste. Possible treatment/recycle options have been under discussion with the LANL representative. These are contingent upon NSSI obtaining the proper NRC license and permit modifications. The NNSA Los Alamos Site Office (LASO) has indicated that this is a viable option, and plans for conducting an audit are in progress. If the DOE Consolidated Audit Program cannot perform a timely audit, LANS will explore assembling an audit team and performing an audit. If NSSI is granted an approval from a LASO audit, they would then need to invest in the necessary equipment to process this waste. This could take an additional year or two before the LANL waste could be shipped for treatment

Justification for extension of Activity 3.1.8 (A).

NNSA/LANS requests the activity date be extended to August 28, 2009. An option had been developed with LLNL in California which had planned to perform a treatability study. This study would have consumed LANL's entire LA-W917 inventory. Before the cylinders could be shipped, LLNL management went through a management change in contractors and put all non-essential projects on hold indefinitely. LANL has re-established contact with Charlie Hunt at LLNL to explore this option again. Mr. Hunt is setting up a conference call to discuss this with his subject matter experts. If LLNL

approves the treatability study by mid 2009, LANL could possibly ship the cylinders by September 2009.

In July 2008, LANS learned of a new option developed at Energy Solutions of Tennessee that could have treated LANL's remaining LA-W917 waste inventory. Under this option, Energy Solutions officials understood their new RCRA Permit would allow them to accept and treat LANL's LA-W917 mixed low-level waste. LANL was moving forward with plans to ship the waste to Energy Solutions in August 2008. However, in early August, Energy Solutions informed LANS they could not accept the waste because an accidental tritium release at their facility resulted in a temporary cessation of operations. LANS has continued to pursue a treatment solution with Energy Solutions. In late October 2008, LANS learned the regulator for Energy Solutions determined that their current permit would not provide for treatment of this LA-W917 waste. Energy Solutions informed LANS personnel they are working with their regulator to obtain a permit modification to accommodate treatment of LANL's waste.

Currently no permitted treatment facilities are available to accept this waste. NNSA/LANS will continue to seek treatment options by contacting waste facilities that may be able to treat this waste type. During FY09, LANS will contact all the facilities listed in item 5 above to determine if they can treat the LA-W917 waste. LANS will also continue in FY09 to seek and contact any newly permitted mixed low-level waste facilities to determine if there are additional treatments available. Until such a treatment option is identified and secured, the only option is to continue onsite storage of the waste.

II.) Section 3.1.9 Compressed Gases Requiring Oxidation. Treatability Group LA-W918
Activity 3.1.9 (A) *“Complete shipping of existing wastes to an off- site treatment facility or complete parallel option”*. Current approved compliance date: August 28, 2008. Proposed Revision 18 compliance date: August 28, 2009.

1. Description of the waste in the treatability group:

Gas cylinders with internal radioactive contamination. Container number and volume currently in storage:

- Container number: C94042517
- Volume: 0.0602 m³

2. List of the EPA hazardous waste numbers associated with the wastes:

D001

3. Description of the treatment processes required for the treatability group:

The treatment process for the waste stream consisting of compressed gases requiring oxidation involves scrubbing or oxidation of the container and/or a reaction to strip and recycle tritium (or other radioactive component).

4. Full list of all commercial facilities the Respondents contacted requesting treatment and acceptance of the treatability group:

Commercial Facility^{1,2}	Location	Contact Name	Contact telephone number
PermaFix	Florida	Stacey McNamara	865-599-0211
		Tammy Monday	865-813-1309
Waste Control Specialists	Texas	Sherrod Reavis	972-488-1495
Energy Solutions of Utah	Utah	Jose Jerez	801-243-3506
Bear Creek Operations	Tennessee	Jose Jerez	801-243-3506
Nuclear Fuel Services	Tennessee	Norm Jacobs	423-743-2503
Lawrence Livermore National Laboratory	California	Charley Hunt	925-422-3813
Integrated Environmental Services	Tennessee	Jeff Gold	404-863-8175
NSSI	Texas	Bob Gallagher	713-641-0391

1. Also consulted with commercial and Department of Energy (DOE) facilities that have had previous successes with treating LANL waste including: the Idaho National Energy Lab's Waste Experimental Reduction facility (WERF), the Toxic Substances Control Act Incinerator at Oak Ridge (TSCAI), researchers here at LANL, American Radiation Services (ARS), Catholic University's Vitreous State Laboratory (CUA/VSL), Colorado Minerals Research Institute (CMRI), Nuclear Fuel Services (NFS), and Pacific Eco Solutions (PEcoS).

2. Also sought advice on treatment options from commercial and DOE facilities including: Oak Ridge National Laboratory, Nevada Test Site, Sandia National Laboratory, Hazen Research, StataG, Argonne/Chicago Office, and Portsmouth DOE Facility.

5. All correspondence, formal or otherwise, between the commercial facilities and the LANL representative identified in item 4 above including the reasons for their denial of acceptance and treatment of the two treatability group.

a) **Permaflox of Florida.** LANS has no written correspondence. Numerous telephone and personal contacts were made by the LANS representative. Their reason for not accepting LANL waste are noted in item I.5.a) above.

- b) **Waste Control Specialists, Texas.** LANS has no written correspondence. Numerous telephone and personal contacts were made by the LANS representative. Their reason for not accepting LANL waste is noted in item I.5.b) above.
- c) **Energy Solutions of Utah.** LANS has no written correspondence. Numerous telephone and personal contacts were made by the LANS representative. Permafrix declined to accept LANL waste for the reasons outlined in item I.5.c) above.
- d) **Bear Creek Operations in Tennessee.** LANS has no written correspondence. Numerous telephone and personal contacts were made by the LANS representative. Bear Creek Operations declined to accept LANL waste for the reasons outlined in item I.5.d) above.
- e) **Nuclear Fuel Services, Tennessee.** LANS has no written correspondence. Numerous telephone and personal contacts were made by the LANS representative. Bear Creek Operations declined to accept LANL waste for the reasons outlined in item I.5.e) above.
- f) **Lawrence Livermore, California.** In an email correspondence dated April 2, 2008, Charley Hunt of LLNL stated that LLNL was unable to accept waste in 2008.
- g) **Integrated Environmental Services, Tennessee.** LANS has no written correspondence. Numerous telephone and personal contacts were made by the LANS Representative. IES's reasons for declining to accept LANL waste are outlined in item I.5.g) above.
- h) **NSSI, Texas.** The possible treatment/recycle options under discussion. The successful outcome is dependent upon license and permit modifications being approved for this facility. Additionally, an audit and NNSA approval are needed. For a detailed description, refer to I.5.h) above.

Justification for extension of Activity 3.1.9 (A).

NNSA/LANS requests the activity date be extended to August 28, 2009. An option had been developed with LLNL to perform a treatability study. Arrangements were in progress, however before the cylinder could be shipped, LLNL management stopped the project. The LLNL transition to a new Prime Contractor put all non-essential projects on hold. LLNL has not determined if this project will be re-started. LANL has re-established contact with Charlie Hunt at LLNL to explore this option again. He is setting up a conference call with his subject matter experts to re-visit this topic. If LLNL approves and initiates the treatability study by mid 2009, LANL could then ship the cylinders by September 2009.

In July 2008, LANS learned of a new option developed at Energy Solutions of Tennessee that could have treated LANL's remaining LA-W918 waste inventory. Under this option, Energy Solutions understood their new RCRA Permit would allow them to accept and treat LANL's LA-W918 mixed low-level waste. LANS was moving forward with plans to ship the waste in August 2008. However, in early August, Energy Solutions informed LANS they could not accept the waste because an accidental tritium release at their facility resulted in a temporary cessation of operations. LANS continued to pursue a treatment solution with Energy Solutions. In late October 2008, LANS learned the regulator for Energy Solutions determined that their current permit would not allow treatment of LANL's LA-W918 waste. Energy Solutions informed LANS personnel they are working with their regulator to obtain a permit modification to accommodate LANL's waste.

Currently no permitted treatment facilities are available to accept this waste NNSA/LANS will continue to seek treatment options by contacting waste facilities that may be able to treat this waste type. During FY09, LANS will contact all the facilities listed in item 5 above to determine if they can treat the LA-W918 waste. LANS will also continue in FY09 to seek and contact any newly permitted mixed low-level waste facilities to determine if there are new options available. Until such a treatment option is identified and secured, the only option is continued onsite storage of the waste..

III.) Section 3.2 Mixed Waste Requiring Further Characterization or for Which Technology Assessment Has Not Been Done. Treatability Group LA-W925 Mercury Waste

Activity 3.2 (J) “Complete shipping of existing wastes to an off-site treatment facility or complete parallel option”. Current approved compliance date: December 31, 2008. Proposed Revision 18 compliance date: December 31, 2010.

1. Description of the waste in the treatability group:

Tritiated items with mercury contamination. Container number and volume currently in storage:

Tritiated items with Mercury contamination

Container number	Volume (m ³)
908448	0.1136
908476	0.2082
908477	0.1136

2. List of the EPA hazardous waste numbers associated with the wastes

D009

3. Description of the treatment processes required for the treatability group:

The treatment process for tritiated items contaminated with mercury requires disassembly of the items, sorting of debris, removal and treatment of the mercury by amalgamation and stabilization, and macroencapsulation of the debris.

4. Full list of all commercial facilities the Respondents contacted requesting treatment and acceptance of the treatability group:

Commercial Facility ^{1,2}	Location	Contact Name	Contact telephone number
PermaFix	Florida	Stacey McNamara	865-599-0211
		Tammy Monday	865-813-1309

Waste Control Specialists	Texas	Sherrod Reavis	972-488-1495
Energy Solutions of Utah	Utah	Jose Jerez	801-243-3506
Bear Creek Operations	Tennessee	Jose Jerez	801-243-3506
Nuclear Fuel Services	Tennessee	Norm Jacobs	423-743-2503
NSSI	Texas	Bob Gallagher	713-641-0391

1. Also consulted with commercial and Department of Energy (DOE) facilities that have had previous successes with treating LANL waste including: the Idaho National Energy Lab's Waste Experimental Reduction facility (WERF), the Toxic Substances Control Act Incinerator at Oak Ridge (TSCAI), researchers here at LANL, American Radiation Services (ARS), Catholic University's Vitreous State Laboratory (CUA/VSL), Colorado Minerals Research Institute (CMRI), Nuclear Fuel Services (NFS), and Pacific Eco Solutions (PECoS).

2. Also sought advice on treatment options from commercial and DOE facilities including: Oak Ridge National Laboratory, Nevada Test Site, Sandia National Laboratory, Hazen Research, StataG, Argonne/Chicago Office, and Portsmouth DOE Facility.

5. All correspondence, formal or otherwise, between the commercial facilities the LANL representative identified in item 4 above including the reasons for their denial of acceptance and treatment of the treatability group.

a) **Permafix of Florida.** LANS has no written correspondence. Numerous telephone and personal contacts were made by the LANS representative. PermaFix provided an estimated treatment cost of \$400,000, but have declined to accept LANL waste because they require facility modifications to treat this waste. These modifications were not specified by Permafix. However, gas discharge emission stack monitoring is required for tritium operations. High levels of tritium such as the amounts associated with this waste stream would typically require more elaborate monitoring of the emission stack.

b) **Waste Control Specialists, Texas.** LANS has no written correspondence. Numerous telephone and personal contacts were made by the LANS represent. WCS's reason for declining to accept LANL waste is that the facility will not accept any non-routine items until their permitting process is completed in Spring of 2010.

c) **Energy Solutions of Utah.** LANS has no written correspondence. Numerous telephone and personal contacts were made by the LANS representative. The reason for Energy Solutions declining to accept LANL waste is that the waste requires further characterization to meet their waste acceptance criteria; all legacy waste containers must be further characterized before shipment. LANL has successfully disposed of 99% of the LANL Background Volume; stricter DOE policies will require new procedures be developed. A request for written authorization is being prepared and will be completed this year so the waste can be further characterized during FY09.

d) **Bear Creek Operations in Tennessee.** LANS has no written correspondence. Numerous telephone and personal contacts were made by the LANS representative. Bear Creek recently received a new RCRA Permit that allows them to treat wastes. However, Bear Creek must develop a new process for this waste. Berar Creek estimates this could take the facility six

months to one year to complete. They are not currently developing a process for this waste, pending a decision by LANL to send them the waste items. LANL is currently comparing costs and relative merits of its options for treatment of this waste, and a decision will be made when the contacted facilities have all had a chance to bid, later this FY.

e) **Nuclear Fuel Services, Tennessee.** LANS has no written correspondence. Numerous telephone and personal contacts were made by the LANS representative. NFS will work with WCS to treat by DeMerc when WCS has the regulatory approval to accept the waste. DeMerc is a proprietary method of treating mercury-contaminated equipment. NFS own the process, but does not have a treatment permit. They work with WCS to use the DeMerc process at the WCS facility in Texas, but WCS is currently not accepting non-routine wastes, pending acceptance of a modification to WCS' Permit, estimated in 2010.

f) **Lawrence Livermore, California.** LLNL is not permitted for the treatment of hazardous waste.

g) **Integrated Environmental Services, Tennessee.** LANS has no written correspondence. Numerous telephone and personal contacts were made by the LANS representative. IES declined to accept this waste because the facility specializes in treating gas cylinders and does not accept other types of mixed waste.

h) **NSSI, Texas.** Possible treatment and recycle options are under discussion but are contingent upon license and permit modifications. An audit and NNSA approval are needed for exception to DOE 435.1. NSSI has shown interest in this waste stream. However, no waste has been shipped from LANL to NSSI in over ten years, and an audit of the facility would have to be performed to meet the requirements of DOE Order 435.1 which governs management of DOE radioactive waste. LASO has indicated that this is a viable option, and plans for an audit are in progress. If the DOE Consolidated Audit Program cannot perform a timely audit, LANS will explore assembling its own audit team and performing an audit. Follow-up audits may be required. If NSSI is eventually approved by LASO, NSSI would then invest in the necessary equipment to process this waste. This could take an additional year or two before the waste could be shipped.

Justification for extension of Activity 3.2 (A).

NNSA/LANS requests the activity date be extended to December 31, 2010. A disposal option may be available, but it would require Permafix to make a facility modification. This may also require the facility to seek modifications to their RCRA permit. It is anticipated that this may take until at least 2010 to complete. An alternative option at Energy Solutions, Tennessee is being developed, but requires further characterization of the waste items. LANL has successfully disposed of 99% of the LANL Background Volume; stricter DOE policies will require new procedures be developed. Paperwork is being prepared and will be completed this year so the waste can be further characterized during FY09.

NNSA/LANS will continue to seek treatment options at other facilities by sending quarterly emails to the facility contacts, as well as calls, meetings and visits as opportunities arise.

Until a treatment option is secured, NNSA/LANS only option is continued onsite storage.

IV.) Section 3.2 Mixed Waste Requiring Further Characterization or for Which Technology Assessment Has Not Been Done. Treatability Group LA-W934 High Activity Waste

Activity 3.2 (J) "Complete shipping of existing wastes to an off- site treatment facility or complete parallel option". Current approved compliance date: December 31, 2008. Proposed Revision 18 compliance date: December 31, 2010.

1. Description of the waste in the treatability group:

Very high tritium with very reactive Lithium. Container number and volume (m³) currently in storage:

Very high tritium with very reactive Lithium

Container number	Volume (m ³)
C93033648,	0.1893
C00130818	0.0125
C00130819	0.0100
C00130820	0.0100
C00130821	0.0100

Tritium traps and tritiated squib assemblies with very high tritium

Container number	Volume (m ³)
C93033648	0.1893
C00130818	0.0125
C00130819	0.0100
C00130820	0.0100
C00130821	0.0100

***(up to 50,000 Curies - requires reacting and recapture or destruction of tritium. Transported by Road Closure - Not DOT shippable in current form.).**

Lead-lined Gloveboxes

Container number	Volume (m ³)
C01144644	7.9000
C03158872	7.0800
C01136480	0.2082
C05180336	0.2082

Portsmouth Debris

Container number	Volume (m ³)
C01136479	0.2082
C01136480	0.2082
C05180336	0.2082

Copper solder joints

Container number	Volume (m ³)
C02151368	0.2082
C01143673	0.2082.

Treated sludges from the TRU Program

Container number	Volume (m ³)
C07190323	0.8496

Hydrogen Sulfide gas cylinder

Container number	Volume (m ³)
C00130822	0.0100

2. List of the EPA hazardous waste numbers associated with the wastes

D001, D003, D004, D008, D009

3. Description of the treatment processes required for the treatability group:

Very high tritium with very reactive Lithium Treatment requires sorting, reacting of LiH, recapture and recycle of tritium, or other options. Tritium traps and tritiated squib assemblies with very high tritium Waste containing up to 50,000 Curies which requires reacting and recapture or destruction of tritium. This waste was transported by road closure from the generation point at LANL to TA-54. It is not Department of Transportation (DOT) shippable in its current form. Lead-lined Gloveboxes This low level waste may become TRU waste when the lead is removed. Treatment requires macroencapsulation, decontamination and removal of plutonium, or removal of the of the lead box lining. Many of these gloveboxes will be added to LANL's waste inventory over the next few years. Portsmouth Debris This waste is contaminated with very high levels of U235 and Tc99. It is the resulting waste from a treatability study of material from the Portsmouth facility, and consists of filter papers, gloves, plastics and other combustible trash. A profile was approved for treatment of this waste at Permafix, using an existing contract between the Portsmouth DOE site and PermaFix which would have saved money on treatment costs. LANL was unsuccessful in attempts to use the Portsmouth contract. The shipment could be made this FY, but new DOT package requirements must be met and a new contracting mechanism found (this waste requires sorting, stabilization of the special nuclear material and technetium 99, and then micro or macroencapsulation of the solids. Copper solder joints This waste requires segregation of the TRU portion from the lower activity waste. The waste could be segregated at LANL or shipped to Bear Creek which requires sorting of high plutonium items for WIPP and low plutonium items for macroencapsulation at Energy Solutions.

4. Full list of all commercial facilities the Respondents contacted requesting treatment and acceptance of the treatability group:

Commercial Facility ^{1,2}	Location	Contact Name	Contact telephone number
PermaFix	Florida	Stacey McNamara	865-599-0211
		Tammy Monday	865-813-1309
Waste Control Specialists	Texas	Sherrod Reavis	972-488-1495
Energy Solutions of Utah	Utah	Jose Jerez	801-243-3506
Bear Creek Operations	Tennessee	Jose Jerez	801-243-3506

Nuclear Fuel Services	Tennessee	Norm Jacobs	423-743-2503
NSSI	Texas	Bob Gallagher	713-641-0391

5. All correspondence, formal or otherwise, between the commercial facilities and the LANL representative is identified in item 4 above including the reasons for their denial of acceptance and treatment of the treatability group items.

a) **Permafix of Florida.** LANS has no written correspondence. Numerous telephone and personal contacts were made by the LANS representative. Permafix's reasons for declining to accept these wastes stream are as follows:

Gloveboxes: The waste profile was accepted by them. Pending approval of funding, the gloveboxes will ship by January 2009. PermaFix has submitted an informal bid of \$450,000 to LANL for treatment of this waste, but this option is contingent upon the PermaFix incorporating their facility modifications. This could push the timeline until 2010 or later. Without the facility modifications PermaFix cannot currently take the waste.

Very high tritium with very reactive Lithium: PermaFix submitted an informal bid of \$450,000 to LANL for treatment. This option is contingent upon PermaFix incorporating their facility modifications. The modifications could take until 2010 or later. PermaFix cannot currently take the waste without those modifications.

Hydrogen Sulfide Cylinders: A disposal option has been developed and the shipment paperwork is in process.

Portsmouth Debris: LANS has successfully profiled the waste but a recent DOT regulatory change requires repackaging. Repackaging is contingent upon development of a new contracting mechanism. Under the prior contract mechanism LANL attempted to use to ship to PermaFix last year, the wastes would have been less expensive to treat. That contract was rejected just before shipment. Without a standard contract (incorporating the DOT change), the shipment could be made as early as January 2009, but will cost about twice as much. The shipment would therefore be delayed if LANL seeks a bid from other facilities not previously interested and their bid is lower than PermaFix. Additional profiles and other paperwork will then be required for a new facility, but the waste could still ship this FY. At least two other facilities have been contacted about this waste and replies are expected by December 2008.

Copper solder joints: A disposal option has been developed and the shipment paperwork is being processed. Attempts to get the LANL generating organization to segregate the waste have thus far been unsuccessful, and it is increasingly likely that the fastest route to disposal will be to ship the drums to Energy Solutions, Tennessee. These arrangements are proceeding, and if no further progress is made with the LANL segregation option, this waste can be shipped in FY09.

Treated sludges from TRU program: A disposal option has been developed and is awaiting approval of funding.

Tritium traps and tritiated squib assemblies with very high tritium: PermaFix declined to build a special facility needed to treat this waste and they aren't interested in pursuing necessary exceptions or changes to their RCRA Permit and NRC license.

b) Waste Control Specialists (WCS), Texas. LANS has no written correspondence. Numerous telephone and personal contacts were made by the LANS representative. WCS's reasons for declining to accept this waste are as follows:

Gloveboxes: WCS is not accepting non-routine waste pending approval of their permit modification which is expected in 2010.

Very high tritium with very reactive Lithium: WCS declined to consider accepting this type of waste.

Hydrogen Sulfide Cylinders: A disposal option has been developed and the shipment paperwork is in process.

Portsmouth Debris: WCS won't build a special facility nor will it get the necessary exceptions or changes to their RCRA Permit and NRC license for this type of waste.

Copper solder joints: A disposal option has been developed and the shipment paperwork is in process. Attempts to get the generating organization to segregate the waste have thus far been unsuccessful. These arrangements are proceeding, and if no further progress is made with the LANL segregation option, this waste can be shipped in FY09.

Treated sludges from TRU program: A disposal option has been developed and is awaiting approval of funding.

Tritium traps and tritiated squib assemblies with very high tritium: WCS declined to build a special facility needed to treat this waste and they aren't interested in pursuing necessary exceptions or changes to their RCRA Permit and NRC license.

c) **Energy Solutions of Utah.** LANS has no written correspondence. Numerous telephone and personal contacts were made by the LANS representative. Energy Solution's reasons for declining to accept waste are as follows:

Gloveboxes, Very high tritium with very reactive Lithium, Portsmouth Debris, Tritium traps and tritiated squib assemblies with very high tritium: Energy Solutions declined to build a special facility needed to treat waste and aren't interested in pursuing necessary exceptions or changes to their RCRA Permit and NRC license.

Hydrogen Sulfide Cylinders, Copper solder joints, Treated sludges from TRU program: A disposal option has been developed and the shipment paperwork is being processed. A disposal option has been developed and is awaiting approval of funding.

d) **Bear Creek Operations in Tennessee.** LANS has no written correspondence. Numerous telephone and personal contacts were made by the LANS representative. The reasons for Bear Creek Operations declining to accept this waste is as follows:

Gloveboxes Bear Creek provided an informal bid of \$300,000 for waste treatment, but this was contingent upon the development of a treatment process. The facility did not provide a fixed timeline, but they estimated it could take 6 months to one year to develop the process. The facility cannot currently accept this waste without the new process.

Very high tritium with very reactive Lithium, Hydrogen Sulfide Cylinders, Portsmouth Debris, Copper solder joints: Their new RCRA permit allows Bear Creek to treat this waste stream. Bear Creek is currently developing the treatment process and cost estimate. These should be available to LANS in 2009 or 2010.

Treated sludges from TRU program: A disposal option has been developed and LANL is awaiting approval of funding.

Tritium traps and tritiated squib assemblies with very high tritium: Bear Creek won't build a special facility or get necessary exceptions or changes to their RCRA Permit and NRC license for this waste.

e) **Nuclear Fuel Services, Tennessee.** LANS has no written correspondence. Numerous telephone and personal contacts were made by the LANS representative. NFS' reason for declining to accept this waste stream is as follows:

Gloveboxes and Very high tritium with very reactive Lithium: NFS cannot accept this type of waste under its NRC license or RCRA Permit.

Hydrogen Sulfide Cylinders, Portsmouth Debris, Copper solder joints: A disposal option has been developed and the shipment paperwork is in process.

Treated sludges from TRU program: A disposal option has been developed and LANL is awaiting approval of funding.

Tritium traps and tritiated squib assemblies with very high tritium: NFS declined to build a special facility needed to treat this waste and aren't interested in pursuing necessary modifications to their RCRA Permit and NRC license.

f) **Integrated Environmental Services, Tennessee.** LANS has no written correspondence. Numerous telephone and personal contacts were made by the LANS representative. IES' reason for declining to accept waste is that IES can only process gas cylinders and does not accept waste from this treatability group, LA-W934.

h) **NSSI, Texas.** LANS has no written correspondence. Numerous telephone and personal contacts were made by the LANS representative. NSSI's reason for declining to accept this waste is as follows:

Gloveboxes: NFS cannot accept this type of waste under its NRC license or RCRA Permit.

Very high tritium with very reactive Lithium: Possible treatment/recycle options are under discussion and would be contingent upon license and permit modifications.

Treated sludges from TRU program: A disposal option has been developed and is awaiting approval of LANL funding.

Tritium traps and tritiated squib assemblies with very high tritium: An audit and NNSA approval is required to satisfy DOE 435.1 [refer to I.5.h) above.]

Justification for extension of Activity 3.2 (A).

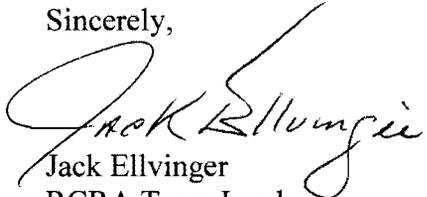
NNSA/LANS request the activity date be extended to December 31, 2010. This activity includes various waste types. Included are highly tritiated traps and squib assemblies. These have many thousands of Curies of tritium, and there is no current disposal option. Other items may have at least one possible disposal option. Funding has been requested to dispose of these wastes in FY09. The tritium cannot be recycled because it is contaminated with mercury. Only one facility has shown an interest in treating this waste. It appears it would require a modification to the facility's RCRA Permit, including negotiations with the host state. It would also require an exemption to DOE Order 453.1 from the local NNSA Los Alamos Site Office. To get NNSA permission to ship requires a current acceptable audit of the commercial facility, and the facility was historically considered a high risk for receiving DOE waste. NSSI has shown interest in this waste stream. However, no waste has been shipped from LANL to NSSI in over ten years, and an approved audit of the facility would have to be performed to meet the requirements of DOE Order 435.1, which governs management of DOE radioactive waste. LASO has indicated that this is a viable option, and plans for an audit are in progress. If the DOE Consolidated Audit Program cannot perform a timely audit, LANS will explore assembling its own audit team and perform the audit. This could probably be accomplished by September of 2008. A corrective action plan might have to be accepted and executed. If NSSI is eventually granted an approved audit from LASO, they would then invest in the necessary equipment to process this waste. This could take an additional year or two before the waste could be shipped. To overcome this hurdle, NNSA/LANS has requested funding this year to work with the regulators, develop an audit team to inspect the facility, and get buy-in from DOE and the host state.

In summary, no permitted treatment facilities are available to accept all of the waste covered under this activity. NNSA/LANS will continue to seek treatment options by contacting waste facilities that may be able to treat this waste type. During FY09 NNSA/LANS will contact the appropriate facilities listed in item 5 above to determine if they can treat the LA-W934 waste. LANS will also continue in FY09 to seek and contact any newly permitted mixed low-level waste facilities to determine if there are additional treatment options available. Until treatment options are secured for all of the LA-934 waste types, NNSA/LANS only option is continued onsite storage for some waste items.

NNSA/LANS will continue to seek viable treatment options for its STP covered wastes. For the short term, continued on-site storage is the only option. NNSA/LANS requests the above activity compliance dates be extended.

Thank you and if you have any questions, please call Jack Ellvinger at 667-0633.

Sincerely,


Jack Ellvinger
RCRA Team Leader
Water Quality & RCRA Group

JE:AD/lm

Cy: James Bearzi, NMED/HWB, Santa Fe, NM
Michael B. Mallory, PADOPS, A102
Richard S. Watkins, ADESHQ, K491
Gene Turner, LASO-EO, 316
Gerald O'Leary, WDP-DO, J591
Paul Newberry, WDP-HMWO, J595
Chris Duy, WDP-HMWO, J595
Albert Dye, ENV-RCRA, K490
Ellen Louderbough, LC-LESH, A187
ENV-DO, File, J978
ENV-RCRA, File, K490
IRM-RMMSO, A150