



TA 50



Environment, Safety, Health & Quality
P.O. Box 1663, Mail Stop K491
Los Alamos, New Mexico 87545
(505) 667-4218/FAX: (505) 665-3811

Date: February 21, 2008
Refer To: ESH&Q-08-019

VIA E-MAIL AND HAND-DELIVERED

Mr. James P. Bearzi
Chief, Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6030

RECEIVED

FEB 21 2008

Dear Mr. Bearzi:

SUBJECT: REQUEST TO RECONSIDER REQUIREMENT TO SUBMIT A RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) PERMIT APPLICATION FOR THE TA-50 RADIOACTIVE LIQUID WASTE TREATMENT FACILITY, LOS ALAMOS NATIONAL LABORATORY

The U.S. Department of Energy (DOE) and Los Alamos National Security LLC (LANS) are in receipt of your January 17, 2008 letter, requesting submittal of a permit application by April 30, 2008 for the TA-50 Radioactive Liquid Waste Treatment Facility (RLWTF). This request is based on the Hazardous Waste Bureau's conclusion that the RLWTF is not eligible for the Resource Conservation and Recovery Act (RCRA) wastewater treatment unit exemption (WWTU), and is a hazardous waste management unit subject to New Mexico's Hazardous Waste Management regulations at 20.4.1 NMAC. We have carefully reviewed this issue and your analysis, and respectfully request that you reconsider this decision. DOE and LANS are confident that the RLWTF meets the requirements for the RCRA WWTU exemption. As explained more fully in the enclosed Position Paper, the RLWTF treats "wastewater" and is not a "dual-use" facility. To assist in your review of this issue, we have provided new information and supporting documents.

We would appreciate the opportunity to meet with you at your convenience to discuss this matter. If you have any questions, please call Gene Turner at (505) 667-5794, or Anthony R. Grieggs at (505) 667-0666.

Sincerely,

Richard S. Watkins
Associate Director
Environment, Safety, Health and Quality
Los Alamos National Security, LLC

George J. Rast
Environmental Operations
Los Alamos Site Office



RSW:GJR/lm

Enclosures: a/s

Cy: Tracy Hughes, OGC, NMED, Santa Fe, NM, w/ enc.
Gene Turner, LASO-EO, w/o enc., A316
Lisa Cummings, LASO-OC, w/o enc., A316
Jan Van Prooyen, DIR, w/o enc., A100
Michael B. Mallory, PADOPS, w/o enc., A102
Sue Stiger, ADEP, w/o enc., M991
Tori George, ENV-DO, w/o enc., J978
Deborah Woitte, LC-LESH, w/o enc., A-187
ENV-RCRA File (08-041), w/enc., K490
ADESHQ, Files, w/enc., K491
IRM-RMMSO, w/enc., A150

Position Paper – Radioactive Liquid Waste Treatment Facility (TA-50) RCRA Wastewater Treatment Exemption

Background

The Radioactive Liquid Waste Treatment Facility (RLWTF) at TA-50 is a batch plant that receives industrial, acid and caustic wastewaters. The RLWTF primarily receives non-hazardous industrial influent from numerous generating points (e.g., specific sinks, floor drains) across the Laboratory. Industrial influent makes up 99% of the volume of wastewater received at the RLWTF. The RLWTF also receives small quantities (up to 50 gallons) of characteristic RCRA waste in the industrial wastewater and in caustic and acid liquid wastewater from TA-55. The RLWTF does not, however, accept listed RCRA waste. Influent wastewater is transported to the RLWTF by truck or through double-walled pipes by gravity flow. The RLWTF discharges treated effluent to Mortandad Canyon through an NPDES-permitted outfall, Outfall #051. Outfall #051 has been an NPDES-permitted outfall since 1978.

The three wastewater streams are conveyed through separate collection systems to separate influent storage tanks. Industrial waste is treated in the Main Treatment Process (MTP), which includes precipitation, sedimentation, filtration, ion exchange, and reverse osmosis. The MTP process generates two secondary waste streams, sludge and evaporator bottoms. The acid and caustic wastewaters are treated in the Room 60 process by neutralization, which removes the characteristic of corrosivity, and are then sent to the evaporator. The industrial wastewater influent is treated to reduce or remove metals, certain radioactive constituents, and other contaminants to meet NPDES discharge limits. The treated wastewater (filtrate) meets NPDES effluent limits and is discharged through Outfall #051. Evaporator distillate is sent to the MTP; and evaporator bottoms are shipped off-site for drying. MTP sludge is a low-level solid radiological waste stream; Room 60 sludge is solidified and disposed as transuranic or mixed transuranic waste. The general process is illustrated in the diagram provided in Attachment A.

Discussion

On October 26, 2007, the New Mexico Environment Department's Hazardous Waste Bureau (the "Bureau") sent LANL an information request concerning the RLWTF's exemption as a wastewater treatment unit (WWTU). LANL responded to this request on November 28, 2007. Based on this response, the Bureau concluded that the RLWTF failed to meet the criteria for a WWTU exemption for two reasons: (1) it is a "dual-use" system, and (2) it does not treat "wastewater." For the reasons discussed below, LANL is confident that the RLWTF treats "wastewater" and is not a dual use system and, therefore, meets the applicable criteria for a WWTU.

I. *RCRA's Wastewater Treatment Unit Exemption (WWTU) & RCRA Treatment*

Under EPA and NMED rules, a wastewater treatment facility is exempt from RCRA treatment permit requirements so long as it qualifies for the WWTU exemption. The primary reason for the WWTU exemption is to avoid imposing duplicative permitting requirements. Without this exemption, facilities could be subject to both an NPDES permit or wastewater pretreatment permit and a RCRA permit for the same unit.¹ To qualify for the WWTU exemption under § 264.1, the RLWTF must meet the following three criteria:

- A. The unit must be part of a wastewater treatment facility which is subject to regulation under either §§ 402 or 307(b) of the Clean Water Act (CWA); EPA clarified that this requirement includes wastewater treatment units at facilities that 1) discharge treated wastewater effluent into surface waters or into a POTW sewer system, or 2) produce no treated wastewater effluent as a direct result of such requirements;²
- B. The unit receives and treats or stores an influent wastewater which is hazardous waste as defined in § 261.3, or generates and accumulates a wastewater treatment sludge which is hazardous waste as defined in § 261.3, or treats or stores a wastewater treatment sludge which is hazardous waste as defined in § 261.3; and
- C. The unit meets the definition of a "tank" or "tank system" in § 260.10.

There are two other important exemptions, applicable to the hazardous wastewater treated at the RLWTF. First, EPA and NMED rules at § 261.4(a)(2) exclude from the definition of "solid waste" industrial wastewater discharges that are point source discharges subject to Section 402 of the CWA. Second, characteristic hazardous wastewaters that are treated to meet the land disposal restriction (LDR) treatment standard of "deactivation" under § 268.40 *and* that are subject to the controls imposed under a CWA NPDES permit, are exempt from additional treatment standards under 40 CFR Part 268. Like the WWTU exemption, these exemptions are intended to avoid dual regulation under the CWA and RCRA. As applied to the RLWTF, the only hazardous wastewaters treated at this facility are characteristic wastes that are treated under its NPDES permit to meet the "deactivation standard" at § 268.40, or are rendered nonhazardous. The effluent discharged from this facility goes to an NPDES permitted Outfall #051, and thus is not a solid waste or subject to hazardous waste management regulations.

¹ U.S. EPA RCRA Online Letter from S. Lowrance, USEPA to Thomas Cervino, Colonial Pipeline Co., Jan. 16, 1993 (Faxback #13526).

² U.S. EPA RCRA Online Letter from Bruce Weddle, USEPA to R. Andes, Marathon Oil Co., Nov. 1, 1993 (Faxback #13634) and 53 Fed. Reg. 34080 (Sept. 2, 1988).

1. Dual Use

The Bureau states that the RLWTF is a “dual use” unit because effluent from the unit discharges both to a NPDES permitted Outfall #051 and “is transported to a non-NPDES permitted evaporation lagoon at TA-53.” For these reasons, the Bureau concludes that the RLWTF is not eligible for the WWTU exemption. As support, the Bureau relies upon EPA guidance that states that the WWTU exemption would not apply to hazardous waste tank systems “*if it is used solely for wastewater treatment for part of the year and is then used for another purpose for another part of the year.*”³ In this letter, a facility sought an EPA opinion as to whether it could use a hazardous waste tank as an accumulation tank part of the year (e.g., to store hazardous waste), and the same tank as a WWTU another part of the year. EPA confirmed that to qualify for the WWTU exemption, the tank must be dedicated solely for on-site wastewater treatment at all times. EPA stated that its 1988 preamble language was “clear on this point,” and concluded that the accumulation tank described by the facility operates on an “alternating use” basis and therefore does not satisfy the WWTU exemption. The 1988 preamble language cited by EPA states:

EPA intends that this [WWTU] exemption apply to any tank system that manages hazardous wastewater and is dedicated for use with an on-site wastewater treatment facility. However, if a tank system, in addition to being used in conjunction with an on-site wastewater treatment facility, is used on a *routine or occasional basis to store or treat a hazardous waste prior to shipment off-site for treatment, storage, or disposal, it is not covered by this exemption.*” 53 Fed. Reg. 34080 (Sept. 2, 1988) (emphasis added).

LANL recognizes, as EPA stated, that the WWTU exemption does not apply to hazardous waste tank systems used on an alternating basis to store or treat hazardous wastewaters prior to off-site shipment for treatment. That is not, however, the case here. The hazardous wastewater tanks used in conjunction with the RLWTF are dedicated 100% to the treatment of potentially hazardous wastewater. The RLWTF collection system is designed to accept for treatment in tanks two hazardous wastewater streams (acid and caustic), in addition to a third waste stream comprised of small volumes of inorganic D002 industrial wastes for treatment in tanks. No hazardous wastewater is stored or accumulated in these tanks or at the RLWTF: (1) prior to shipment off-site for treatment, or (2) on an alternating basis with storage part of the year, and treatment the remainder of the year. As illustrated in the attached diagram, hazardous liquid wastes are treated to meet NPDES permit limits, with treated effluent discharged to Outfall #051 (see Attachment A).

In addition, LANL does not transport hazardous wastewater effluent for treatment to a “non-NPDES evaporation lagoon at TA-53” as implied. On two instances (5 and 7 years ago), LANL transferred from TA-50 to TA-53 *non-RCRA* wastewater effluent (low-level

³ U.S. EPA RCRA Online, Letter from E. Cotsworth to S. Pendleton (Faxback # 14262)

radioactive waste) from TA-50's industrial wastewater tanks for treatment by evaporation in tanks (not lagoons).⁴ The fact that a wastewater treatment facility, such as the RLWTF, transfers non-RCRA wastewater for on-site treatment has no bearing on RCRA's WWTU exemption; instead, EPA explicitly states that the exemption would not cover *hazardous waste* tank systems used as a WWTU and on a "routine or occasional basis to store or treat a *hazardous waste* prior to shipment off-site for treatment, storage or disposal." Further, these discharges were not to a non-NPDES permitted outfall, but to tanks fully covered under LANL's NPDES permit.⁵ Attached are copies of analytical results demonstrating that the wastewater transferred from TA-50 to TA-53 was non-RCRA wastewater (see Attachment C). Based on these facts, there is no basis to exclude the RLWTF from the WWTU exemption.

2. *Wastewaters*

The Bureau states that the RLWTF does not treat "wastewater" and is therefore ineligible for the WWTU exemption. To reach this conclusion, the Bureau defines "wastewater" to be wastes "*which at times contain less than 95% water and concentrations of contaminants exceeding 2%.*" Based on this standard, the Bureau then concludes that the RLWTF does not treat "wastewaters" because LANL's waste profile forms (WPFs) show ranges of "water" that are less than 95% and contaminant concentration exceeding 2%. The application of this new standard to the RLWTF raises several important concerns.

First, the standard was not developed by rule or in any publicly available guidance, policy or other document for the regulated community or LANL to review and comment upon to determine what constitutes "wastewaters" for purposes of wastewater treatment facilities. It is unclear where these specific percentages derive from, and what support and sources were used to develop this standard. Although EPA recognizes that states can develop their own interpretations of "wastewaters," it must do so by regulations, or in policy.⁶ Significant ramifications flow from an agency rule addressing the amounts of liquids and solids needed to constitute "wastewaters" under RCRA, and any such standard requires public notice and participation through rulemaking.

⁴ The RLWTF at TA-53 does not accept, treat, store, or discharge hazardous waste.

⁵ LANL properly filed Notices of Changed Conditions in accordance with its NPDES Permit and CWA rules to allow it to discharge non-RCRA wastewater effluent to TA-53 under its NPDES Permit (see Attachment B). The first, dated October 22, 2001, described the transfer of treated effluent from the RLWTF to the Radioactive Liquid Waste Treatment Plant (RLWTP) at TA-53 for further treatment by solar evaporation. The wastewater transferred to the RLWTF in 2001 was non-RCRA regulated wastewater effluent with elevated levels of tritium. The second Notice of a planned change at NPDES Outfall #051, dated October 14, 2003, described the transfer of treated non-RCRA-regulated wastewater with elevated levels of Chemical Oxygen Demand (COD) from the TA-50 RLWTF to the solar evaporator units at TA-53.

⁶ U.S. EPA Online Letter from S. Lowrance, EPA to Heritage Environmental Services, Indiana (Feb. 11, 1991) (Faxback # 11582).

Second, the Bureau's standard appears to be unprecedented and unsupported by EPA policy as suggested. No EPA guidance states that to constitute a "wastewater" at a wastewater treatment facility, wastewater must contain 95% or more liquids and contaminant concentrations below 2%. The faxback relied upon by the Bureau cites in its entirety a 1981 letter which states "wastewaters are 'not concentrated chemicals or *non aqueous* wastes,' and refers to 'wastes which are substantially water with contaminants amounting a few percent at most.'" ⁷ Although EPA rules do not define the term "non aqueous," they define the term "aqueous" to mean a liquid phase containing more than 50% water. ⁸ Since 1981, however, EPA issued guidance regarding the interpretation of "wastewater" as applied to wastewater treatment units. In 1987, the EPA issued an OSWER directive regarding the application of the RCRA permit exclusion for a wastewater treatment unit. EPA stated:

The OSW [Office of Solid Waste] currently has no formal definition of wastewater. Although Agency guidance suggested that wastewater should not exceed more than a 'few' percent constituents other than water, this definition was never promulgated. *Therefore, our current interpretation is that any waste that is treated in a unit that is subject to regulation under Section 402 or 307(b) of the Clean Water Act and meets the other requirements specified in 40 CFR 260.10 for a wastewater treatment unit is eligible for the exemption.* ⁹

Later, in 1992, EPA stated that the reference to a "few percent" source contaminant in its prior [1981] memo is "*not a regulatory definition of wastewater, and, thus, not part of the definition of a wastewater treatment unit.*" ¹⁰ In this same guidance, EPA stated that "[t]ypically, [the agency] has used a very broad interpretation [of wastewater] in other regulatory programs (e.g., the Effluent Guidelines Division's Development Document for Electroplating Pretreatment Standards defines wastewater as "*any water that has been released from the purpose for which it was intended to be used*"). Indeed, there are numerous instances where EPA has discussed wastewaters and the application of solid/liquid mixtures managed in wastewater treatment units. EPA does not suggest that only liquids greater than 95% meet the definition of "wastewaters" in the context of wastewater treatment units. For example, in reviewing percentage of solids and liquid hazardous wastes (e.g., paints) the agency stated that "*we [EPA] believe that wastes containing less than 15% solids will be managed in units associated with wastewater*

⁷ U.S. EPA RCRA Online, Memo from E. Cotsworth to S. Coleman, Region VI, Aug. 4, 2000 (Faxback 14472) (referring to letter from J. Lehman to R. Boyton, July 31, 1981).

⁸ U.S. EPA RCRA Online, Letter from R. Scarberry, EPA to S. Gock, Printing Developments, Inc., Sept. 14, 1987 (Faxback 9443.1987).

⁹ U.S. EPA OSWER Dir. 9433.1987, 1987 WL 383857 (July 12, 1987).

¹⁰ U.S. EPA RCRA Online, Letter from S. Lowrance, EPA to T. Hopkins, Department of Environmental Quality, Aug. 15, 1990 (Faxback 9483.1990).

treatment, such as tanks or surface impoundments.”¹¹ The only definition of “wastewater” in EPA rules was developed in conjunction with land disposal restriction treatment standards, which is not relevant to and considered overly restrictive when applied to wastewater treatment.¹² Some states, like Ohio, have issued formal guidance on RCRA’s wastewater treatment exemption and define “wastewater” to mean “any waste authorized to be treated in a WWTU under a CWA wastewater permit.”¹³ This definition, in turn, is consistent with EPA’s OSW guidance discussed above.

Third, the Bureau’s position is not technically sound and would be unreasonable if applied as a new standard to determine the RLWTF receives “wastewater.” The RLWTF was constructed, designed and engineered to treat radioactive liquid waste that constitutes “wastewaters.” These wastewaters are treated, and any effluent must meet stringent technology-based effluent limitations for wastewater discharges required by its NPDES permit under Section 402 of the CWA, including Total Suspended Solid (TSS) limitations of 30 to 40 mg/liter and C.O.D. of 125 mg/liter. Wastewater influent is transported to the facility by truck or through double-walled pipes by gravity flow. The wastewater is so aqueous that no pumps or other equipment are necessary to transport non-liquid wastes or solid/liquid wastewater mixtures. The fact that approximately 33 WPFs identify “additional constituents” as containing “water” in a range (e.g., 80 to 99%) has no bearing whatsoever on the issue of whether the treatment facility is receiving “wastewater,” or whether the facility has the technological capability to treat liquids comprised substantially of water such as 70 to 80%. Instead, the RLWTF is designed and technologically capable of treating wastestreams of less than 95% liquid. The RLWTF established influent limits for contaminants listed in the NPDES permit, based upon the treatment capabilities of the facility’s treatment units. This treatment process, in turn, neutralizes the waste, removes hazardous constituents, and discharges liquid effluent which meets NPDES permit requirements. Indeed, EPA encourages wastewater treatment as a method to reduce toxicity, mobility and the amount of hazardous waste generated so as to minimize threats to human health and the environment. A standard that a wastewater treatment system must treat “wastewaters” defined as being greater than 95% liquids and contaminant concentrations less than 2% thwarts, rather than encourages, technological improvements designed to treat these types of wastestreams.

¹¹ See 66 Fed. Reg. 10060, 10104 (Feb. 13, 2001). See e.g., 60 Fed. Reg. 66344 (Dec. 21, 1995) (in reviewing risk analysis for waste management units used to manage wastewater and non-wastewater, EPA has stated that it “believes that wastes containing less than 15% solids will more frequently be managed in the types of units associated with wastewater treatment, such as tanks and surface impoundments . . . treatment will produce solid residues or treated water discharged under the CWA”).

¹² U.S. EPA RCRA Online, S. Lowrance, USEPA to Ted Hopkins, Oregon Department of Environmental Quality, Aug. 15, 1990 (Faxback # 9483.1990) (EPA stated that the LDR definition of “wastewater” was defined for purposes of establishing BDAT treatability groups and was “not pertinent” to the issue of whether a unit could be a wastewater treatment unit or elementary neutralization unit).

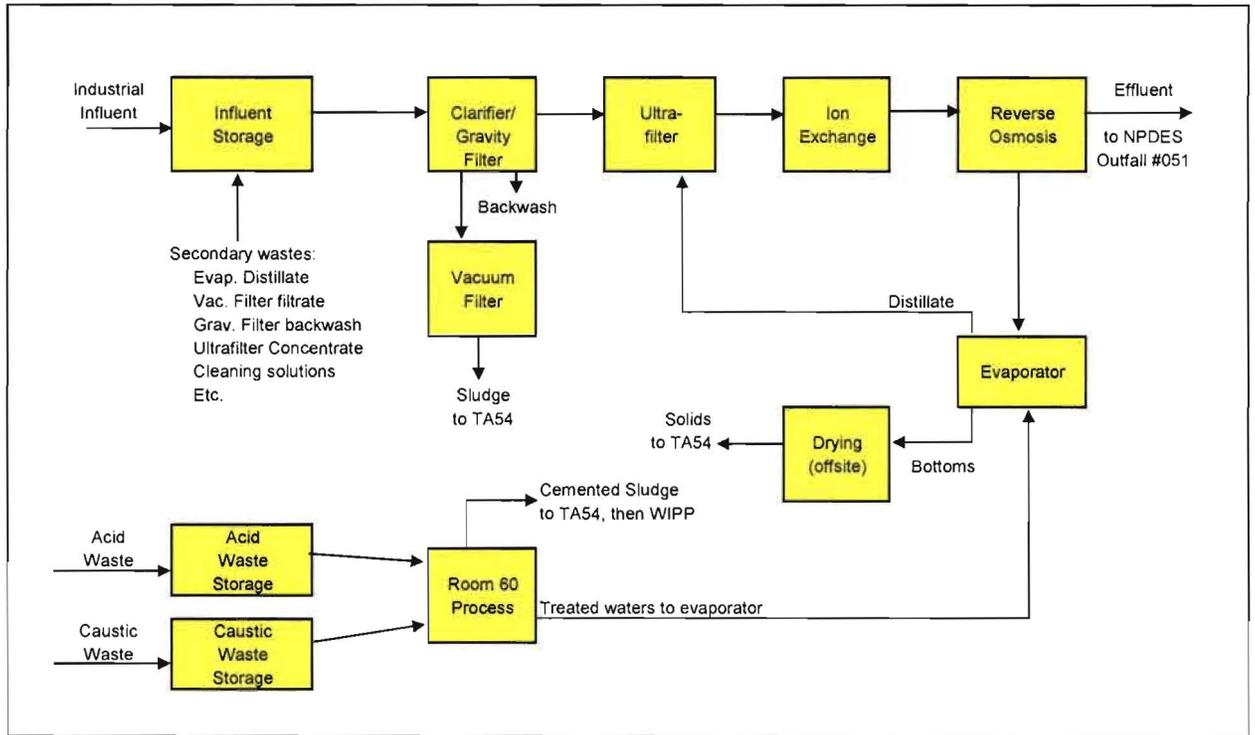
¹³ See State of Ohio Environmental Protection Agency, *The Wastewater Treatment Unit Exemption Under Ohio Hazardous Waste Rules* (July 2004).

Fourth, the Bureau's reliance on LANL WPF's to conclude that the RLWTF treats wastestreams with less than 95% liquid and constituent concentrations exceeding 2% is technically misplaced. A WPF may denote a range of liquids, but this does not necessarily support the conclusion that a specific waste stream has liquids less than 95% with concentrated contaminants exceeding 2%. For example, WPF 35269 indicates that this wastewater is hazardous for chromium at a maximum concentration of 6.0 ppm. The other constituents in this wastewater are sodium sulfate at 1.5% and beryllium at 0.00001%; leaving the liquid concentration at approximately 98.5%. Another example is WPF 32733. This WPF references a wastewater that is only hazardous for corrosivity. Nitric acid is the primary constituent ranging from 0.5% to 1%. This wastewater also contains other constituents with a percentage concentration well below 1%; indicating that liquid makes up greater than 98.5% of the waste stream (see Attachment D). Further, samples collected at the RLWTF from January 2006 to December 2007 show that the wastewater influent at the headworks is, under average conditions, >99.9% liquid and <0.1% solids, and, under worst case conditions, >99% liquid and <1% solids. In sum, the WPFs do not support the technical conclusion that the RLWTF treats wastestreams with less than 95% liquid and contaminate concentrations exceeding 2%.

ATTACHMENT A

ATTACHMENT A

TA50 RLWTF Process Schematic



ATTACHMENT B

Los Alamos

NATIONAL LABORATORY

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

Date: October 22, 2001
In Reply Refer To: ESH-18/WQ&H:01-353
Mail Stop: K497
Telephone: (505) 665-1859

Mr. Samuel Coleman, P. E., Director
Compliance Assurance and Enforcement Division (6-EN)
U. S. Environmental Protection Agency
1445 Ross Avenue
Dallas, Texas 75202-2733

**SUBJECT: NOTICE OF CHANGED CONDITION AT NPDES OUTFALL 051,
NPDES PERMIT NO. NM0028355**

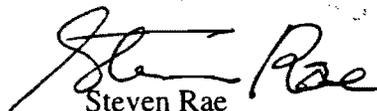
Dear Mr. Coleman:

On June 13, 2000, Los Alamos National Laboratory notified (Letter ESH-18/WQ&H:00-0194) the U. S. Environmental Protection Agency (EPA) regarding a change in the waste streams contributing to the effluent discharged from NPDES Outfall 051 at the Technical Area 50, Radioactive Liquid Waste Treatment Facility (TA-50 RLWTF). In order to meet the Department of Energy's (DOE) Derived Concentration Guidelines (DCGs) concerning radioactive constituents established by DOE Order 5400.5 and to meet ground water discharge requirements for nitrate and other parameters established by New Mexico Water Quality Control Commission (NMWQCC) Regulations, the TA-50 RLWTF upgraded its treatment processes in a two-phased project. Phase I, installation of the Tubular Ultrafiltration and Reverse Osmosis treatment units, was completed in November, 1999. Phase II, installation of the Electrodialysis Reversal (EDR) treatment unit and the interim mechanical evaporator, was completed in January, 2000. These upgrades have significantly improved effluent quality at TA-50 RLWTF.

Provided as Enclosure 1 is the updated process schematic for the TA-50 RLWTF which includes the Phase I and Phase II upgrades. Additionally, reverse osmosis permeate and evaporator distillate with more than 20 nCi/l of tritium are trucked to the TA-53 Radioactive Liquid Wastewater Treatment Plant (TA-53 RLWTF) which makes use of solar evaporation. A process schematic for the TA-53 RLWTF is provided as Enclosure 2.

Please contact Mike Saladen of the Laboratory's Water Quality and Hydrology Group at (505) 665-6085 if additional information would be helpful.

Sincerely,



Steven Rae

Group Leader

Water Quality and Hydrology Group

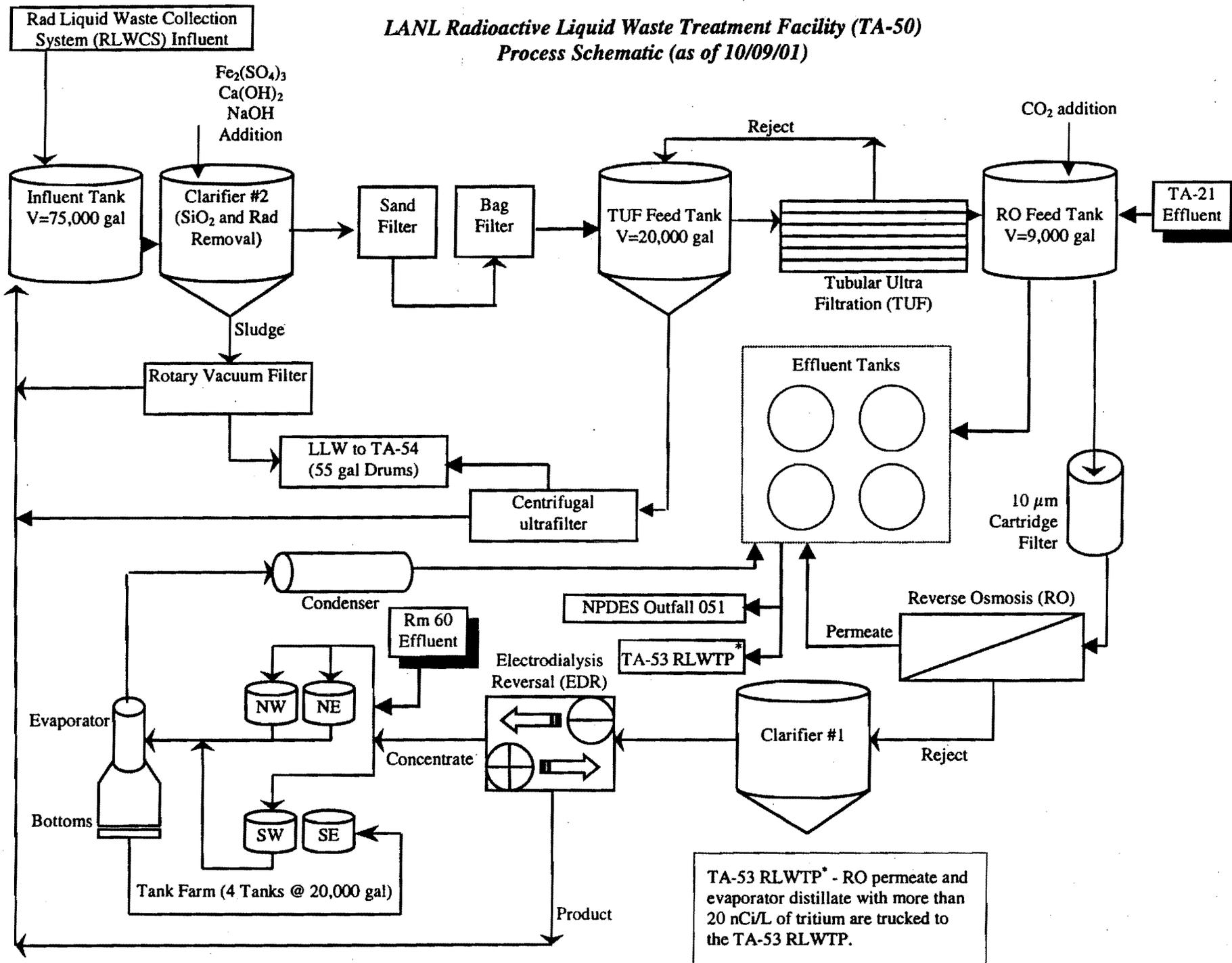
SR:MS/tal

Enclosures: a/s

Cy: E. Spencer, USEPA, Region VI, Dallas, Texas, w/enc.
S. Wilson, USEPA, Region VI, Dallas, Texas, w/enc.
J. Davis, NMED/SWQB, Santa Fe, New Mexico, w/enc.
J. Vozella, DOE/LAAO, w/enc., MS A316
K. Agogino, DOE/AL, w/enc., MS A316
J. Holt, ADO, w/enc., MS A104
A. Standford, FWO-DO, w/enc., MS K492
B. Ramsey, FWO-DO, w/enc., MS K492
D. McLain, FWO-RLW, w/enc., MS E518
R. Alexander, FWO-RLW, w/enc., MS E518
L. McAtee, ESH-DO, w/enc., MS K491
P. Thullen, ESH-DO, w/enc., MS K491
D Stavert, ESH-DO, w/enc., MS K491
B. Beers, ESH-18, w/enc., MS K497
M. Saladen, ESH-18, w/enc., MS K497
M. Bailey, ESH-18, w/enc., MS K497
D. Woitte, UC-GEN, w/enc., MS A187
WQ&H File, w/enc., MS K497
IM-5, w/enc., MS A150

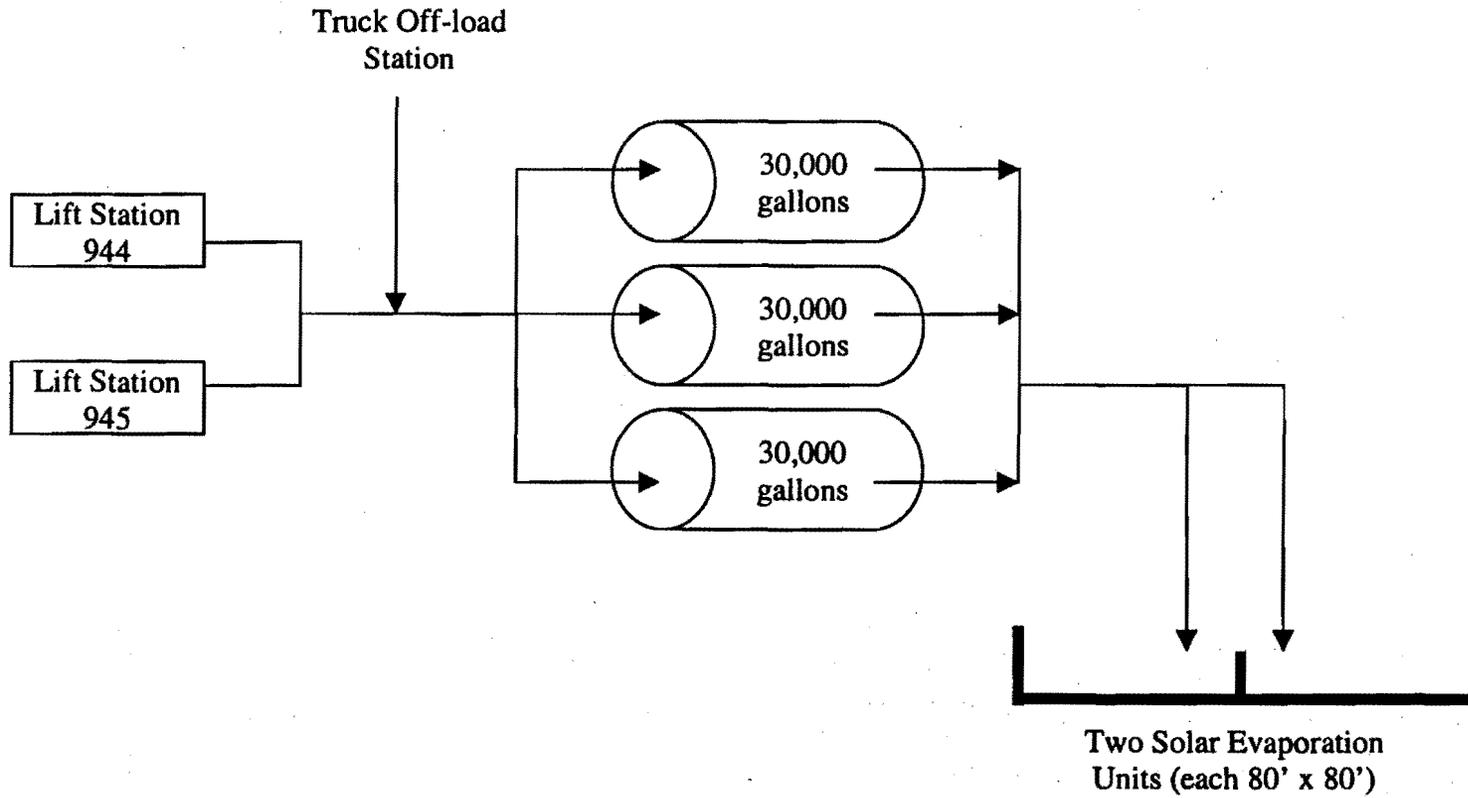
ENCLOSURE 1

LANL Radioactive Liquid Waste Treatment Facility (TA-50) Process Schematic (as of 10/09/01)



ENCLOSURE 2

LANL Radioactive Liquid Waste Treatment Plant (TA-53) Process Schematic (as of 10/09/01)





Los Alamos
NATIONAL LABORATORY

*Risk Reduction & Environmental Stewardship Division
Water Quality & Hydrology Group (RRES-WQH)*

PO Box 1663, MS K497

Los Alamos, New Mexico 87545

(505) 665-1859/Fax: (505) 665-9344

Date: October 14, 2003

Refer to: RRES-WQH: 03-267

Ms. Waudelle Strickley
Environmental Specialist
U. S. Environmental Protection Agency
Water Enforcement Branch
1445 Ross Avenue
Dallas, Texas 75202-2733

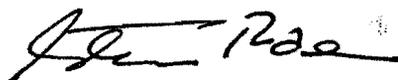
**SUBJECT: NOTICE OF PLANNED CHANGE AT NPDES OUTFALL 051,
NPDES PERMIT NO. NM0028355**

Dear Ms. Strickley:

The National Pollutant Discharge Elimination System (NPDES) Permit No. NM0028355 for Los Alamos National Laboratory requires the permittee to notify the U. S. Environmental Protection Agency (EPA) regarding any physical alterations or additions to the permitted facility that could significantly change the nature or increase the quantity of pollutants discharged. In accordance with Part III.D.1.a. *Reporting Requirements* of the Laboratory's NPDES Permit, we are providing written notification regarding the transfer of up to 80,000 gallons of treated wastewater from the TA-50 Radioactive Liquid Treatment Facility (RLWTF) to the TA-53 basins for evaporation. This wastewater meets all NPDES effluent requirements with the exception of Chemical Oxygen Demand (COD). The Laboratory's NPDES Permit limit for COD is 125 mg/l. The COD results for the RLWTF wastewater is approximately 400 mg/l and therefore does not meet effluent limits for discharge at NPDES Outfall 051. Mr. Scott Wilson, EPA Region VI (Permits Branch), was verbally notified of this request for transfer on October 8, 2003.

Please contact Mike Saladen of the Laboratory's Water Quality and Hydrology Group at (505) 665-6085, if additional information would be helpful.

Sincerely,



Steven Rae
Group Leader
Water Quality & Hydrology Group

SR:MS/tml

Cy: S. Wilson, USEPA, Region VI, Dallas, TX
M. Leavitt, NMED/SWQB, Santa Fe, NM
J. Vozella, DOE/OLASO, MS A316
G. Turner, DOE/OLASO, MS A316
A. Stanford, FWO-DO, MS K492
D. McLain, FWO-WFM, MS E518
R. Alexander, FWO-WFM, MS E518
B. Ramsey, RRES-DO, MS J591
K. Hargis, RRES-DO, MS J591
T. George, RRES-DO, MS J591
D Stavert, RRES-EP, MS J591
B. Beers, RRES-WQH, MS K497
M. Saladen, WQH, MS K497
P. Wardwell, LC-ESH, MS A187
RRES-WQH File, MS K497
IM-5, MS A150

ATTACHMENT C

LOS ALAMOS
National Laboratory

WASTE PROFILE FORM

Contact (if other than given below)		For rapid processing, complete all sections in black or blue ink and mail to: EM-SWO at MS J595. For assistance with completing this form, call EM-SWO at 5-4000.			Reference Number 36754 (for EM-SWO use only.)	
Generator's Z Number 113354	Waste Generator's Name (print) V. Peter Worland		WMC's Z Number 117028	WMC's Name (print) Steve Torrez		
Generator's Telephone 667-4301	Generator's Mail Stop E-518	Waste Generating Group FMU-6 WFM	Waste Stream Technical Area 50	Building 1	Room 34B	
Waste Accumulation (Check only one.)		<input type="checkbox"/> Satellite Accumulation Area <input type="checkbox"/> Less-than-90-days Storage Area <input type="checkbox"/> TSDF <input type="checkbox"/> Universal Waste Storage Area <input checked="" type="checkbox"/> None of the Above			Site no: _____ Site no: _____ Site no: _____ Site no: _____	
ER Use Only		<input type="checkbox"/> ER Site			PRS #: _____	
Method of Characterization (Check as many as apply.)		<input checked="" type="checkbox"/> Chemical/Physical Analysis VPW 10/8/03 <input checked="" type="checkbox"/> Radiological Analysis VPW 10/8/03 <input type="checkbox"/> PCB Analysis <input checked="" type="checkbox"/> Acceptable Knowledge Documentation <input type="checkbox"/> MSDS			Sample #: _____ Sample #: see attached Sample #: _____ Documentation #: _____ COC Tracking # N-051C3007 *MCMF	

Section 1 - Chemical and Physical Information

Waste Type (Check only one.)	Waste Category (Check as many as apply.)	Waste Source (Check only one.)	Waste Matrix (Check only one.)
<input type="checkbox"/> Unused/Unspent Chemical (Complete all sections as appropriate.) <input checked="" type="checkbox"/> Process Waste/Spent Chemical/ other (Complete all sections.) <input type="checkbox"/> Green is Clean Waste (Complete all sections as appropriate.)	<input checked="" type="checkbox"/> Inorganic <input type="checkbox"/> Organic Volatile Organics <input type="checkbox"/> < 500 ppm <input type="checkbox"/> ≥ 500 ppm <input type="checkbox"/> Solvent * <input type="checkbox"/> Degreaser * <input type="checkbox"/> Dioxin <input type="checkbox"/> Electroplating <input type="checkbox"/> Treated Hazardous waste residue <input type="checkbox"/> Explosive process <input type="checkbox"/> Infectious/Medical <input type="checkbox"/> Biological <input type="checkbox"/> Beryllium <input type="checkbox"/> Empty Container (See instructions) <input type="checkbox"/> Battery (See instructions) Asbestos <input type="checkbox"/> friable <input type="checkbox"/> non-friable PCB Source Concentration <input type="checkbox"/> PCB < 50 ppm <input type="checkbox"/> PCB ≥ 50 - < 500 ppm <input type="checkbox"/> PCB ≥ 500 ppm <input type="checkbox"/> Other (Describe below)	Routine Waste <input type="checkbox"/> Decon <input type="checkbox"/> Materials Processing/Production <input type="checkbox"/> Research/Development/Testing <input type="checkbox"/> Scheduled Maintenance <input type="checkbox"/> Housekeeping - Routine <input type="checkbox"/> Spill Cleanup - Routine <input type="checkbox"/> Sampling - Routine Monitoring <input type="checkbox"/> Other (Describe below) Non-routine Waste <input type="checkbox"/> Abatement <input type="checkbox"/> Construction/Upgrades <input type="checkbox"/> Demolition <input type="checkbox"/> Decon/Decom <input type="checkbox"/> Investigative Derived <input type="checkbox"/> Orphan/Legacy <input type="checkbox"/> Remediation/Restoration <input type="checkbox"/> Repacking (Secondary) <input type="checkbox"/> Unscheduled Maintenance <input type="checkbox"/> Housekeeping - Non-routine <input type="checkbox"/> Spill Cleanup - Non-routine <input type="checkbox"/> UST - Non-petroleum <input type="checkbox"/> UST - Petroleum <input checked="" type="checkbox"/> Other (Describe below)	Gas <input type="checkbox"/> ≤ 1.5 Atmospheres pressure <input type="checkbox"/> > 1.5 Atmospheres pressure <input type="checkbox"/> Liquefied compressed gas Liquid <input checked="" type="checkbox"/> Aqueous <input type="checkbox"/> Non-aqueous <input type="checkbox"/> Suspended Solids/ Aqueous <input type="checkbox"/> Suspended Solids/ Non-aqueous Solid <input type="checkbox"/> Powder/Ash <input type="checkbox"/> Solid <input type="checkbox"/> Sludge <input type="checkbox"/> Absorbed liquid Matrix Type (Check only one.) <input checked="" type="checkbox"/> Homogeneous <input type="checkbox"/> Heterogeneous (Describe below)
Waste Classes Radiological Information Was Waste Generated in a RCA? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Non-radioactive <input checked="" type="checkbox"/> Radioactive <input checked="" type="checkbox"/> Low-Level <input type="checkbox"/> Transuranic	Wastewater Information <input type="checkbox"/> Wastewater for SWSC (TA-46) (Complete Attachment 1) <input checked="" type="checkbox"/> Wastewater for TA53 RLWTF (TA-50/TA-21) (Complete Attachment 2) <input type="checkbox"/> Wastewater for TA-16 (HE)	Classification Information <input checked="" type="checkbox"/> Unclassified <input type="checkbox"/> Classified/Sensitive	

Waste/Process Description (Chemical formulas may be used in this field.)

This waste is off spec effluent water from the RLWTF at TA-50. The water meets all radiological and non-radiological parameters for discharge to the NPDES permitted outfall except for chemical oxygen demand (COD). The COD limit is 125mg/L. This water has up to 500mg/L COD.

Section 2 - Characteristics							
Ignitability (Check only one.) (°F) (°C)		Corrosivity (Check only one.) (pH)		Reactivity (Check as many as apply.)		Boiling Point (Check only one.) (°F) (°C)	
<input type="checkbox"/> < 73	<input type="checkbox"/> < 22.8	<input type="checkbox"/> ≤ 2.0	<input type="checkbox"/> ≤ 2.0	<input type="checkbox"/> RCRA Unstable	<input type="checkbox"/> ≤ 95	<input type="checkbox"/> ≤ 35	<input type="checkbox"/> ≤ 95
<input type="checkbox"/> 73 - 99	<input type="checkbox"/> 22.8 - 37.2	<input type="checkbox"/> 2.1 - 4.0	<input type="checkbox"/> 2.1 - 4.0	<input type="checkbox"/> Water Reactive	<input checked="" type="checkbox"/> > 95	<input type="checkbox"/> > 35	<input checked="" type="checkbox"/> > 95
<input type="checkbox"/> 100 - 139	<input type="checkbox"/> 37.8 - 59.4	<input type="checkbox"/> 4.1 - 6.0	<input type="checkbox"/> 4.1 - 6.0	<input type="checkbox"/> Cyanide Bearing (> 250 ppm)			
<input type="checkbox"/> 140 - 200	<input type="checkbox"/> 60.0 - 99.3	<input checked="" type="checkbox"/> 6.1 - 9.0	<input type="checkbox"/> 6.1 - 9.0	<input type="checkbox"/> Sulfide Bearing (> 500 ppm)			
<input type="checkbox"/> > 200	<input type="checkbox"/> > 99.3	<input type="checkbox"/> 9.1 - 12.4	<input type="checkbox"/> 9.1 - 12.4	<input type="checkbox"/> Pyrophoric			
<input type="checkbox"/> EPA Ignitable - Non-liquid		<input type="checkbox"/> ≥ 12.5	<input type="checkbox"/> ≥ 12.5	<input type="checkbox"/> Shock Sensitive			
<input type="checkbox"/> DOT Flammable Gas		<input type="checkbox"/> Liquid corrosive to steel	<input type="checkbox"/> Liquid corrosive to steel	<input type="checkbox"/> Explosive - DOT Div. _____			
<input type="checkbox"/> DOT Oxidizer		<input type="checkbox"/> Non-aqueous	<input type="checkbox"/> Non-aqueous	<input checked="" type="checkbox"/> Non-reactive			<input type="checkbox"/> Not applicable
<input checked="" type="checkbox"/> Not ignitable							

Identify for all contaminants listed.	Characterization Method			Concentration of Contaminants		
	AK	TCLP	Total	None or Non-detect	Present Below Regulatory Limit	Above Regulatory Limit Minimum Maximum
Toxicity Characteristic Metals						(Concentration in ppm only.)
Arsenic	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 5.0 ppm	_____ to _____ ppm
Barium	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 100.0 ppm	_____ to _____ ppm
Cadmium	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 1.0 ppm	_____ to _____ ppm
Chromium (Total)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 ppm	_____ to _____ ppm
Lead	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 ppm	_____ to _____ ppm
Mercury	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> < 0.2 ppm	_____ to _____ ppm
Selenium	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 1.0 ppm	_____ to _____ ppm
Silver	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 ppm	_____ to _____ ppm
Toxicity Characteristic Organics						
Benzene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____ to _____ ppm
Carbon tetrachloride	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____ to _____ ppm
Chlorodane	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.03 ppm	_____ to _____ ppm
Chlorobenzene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 100.0 ppm	_____ to _____ ppm
Chloroform	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> < 6.0 ppm	_____ to _____ ppm
o - cresol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____ to _____ ppm
m - cresol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____ to _____ ppm
p - cresol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____ to _____ ppm
Cresol - mixed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____ to _____ ppm
2,4-D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 10.0 ppm	_____ to _____ ppm
1,4-Dichlorobenzene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 7.5 ppm	_____ to _____ ppm
1,2-Dichloroethane	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____ to _____ ppm
1,1-Dichloroethylene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.7 ppm	_____ to _____ ppm
2,4-Dinitrotoluene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.13 ppm	_____ to _____ ppm
Endrin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.02 ppm	_____ to _____ ppm
Heptachlor (& its epoxide)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.008 ppm	_____ to _____ ppm
Hexchlorobenzene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.13 ppm	_____ to _____ ppm
Hexchlorobutadiene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____ to _____ ppm
Hexchloroethane	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 3.0 ppm	_____ to _____ ppm
Lindane	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.4 ppm	_____ to _____ ppm
Methoxychlor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 10.0 ppm	_____ to _____ ppm
Methyl ethyl ketone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____ to _____ ppm
Nitrobenzene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 2.0 ppm	_____ to _____ ppm
Pentachlorophenol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 100.0 ppm	_____ to _____ ppm
Pyridine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 ppm	_____ to _____ ppm
Tetrachloroethylene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.7 ppm	_____ to _____ ppm
Toxaphene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____ to _____ ppm
Trichloroethylene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____ to _____ ppm
2,4,5-Trichlorophenol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 400.0 ppm	_____ to _____ ppm
2,4,6-Trichlorophenol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 2.0 ppm	_____ to _____ ppm
2,4,5-TP (Silvex)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 1.0 ppm	_____ to _____ ppm
Vinyl chloride	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.2 ppm	_____ to _____ ppm

Documentation # MKMP
 August 2003
 Monthly Composite Sample Analyzed at RWTR

8/31/2003	3.72308	TRITIUM	8.2E-09	CI/L	8E-10	FINAL50	MONTHLYCMP	RAD	MCF0016,18
8/31/2003	3.72308	AMMONIA-N	3	MG/L	0.3	FINAL50	MONTHLYCMP	MINERAL	EMH011,150
8/31/2003	3.72308	NITRATE-N	0.08	MG/L	0.01	FINAL50	MONTHLYCMP	MINERAL	EMH012,34
8/31/2003	3.72308	NITRITE-N	0.3	MG/L	0.03	FINAL50	MONTHLYCMP	MINERAL	EMH012,34
8/31/2003	3.72308	PERCHLORATE	0	MG/L	0.001	FINAL50	MONTHLYCMP	MINERAL	EMH011,74
8/31/2003	3.72308	CHLORIDE	4	MG/L	1	FINAL50	MONTHLYCMP	MINERAL	EMH012,34
8/31/2003	3.72308	FLUORIDE	0.29	MG/L	0.03	FINAL50	MONTHLYCMP	MINERAL	EMH012,34
8/31/2003	3.72308	SULFATE	10	MG/L	1	FINAL50	MONTHLYCMP	MINERAL	EMH012,34
8/31/2003	3.72308	COPPER	0.012	MG/L	0.01	FINAL50	MONTHLYCMP	MINERAL	EMH4301,4
8/31/2003	3.72308	LEAD	0	MG/L	0.02	FINAL50	MONTHLYCMP	MINERAL	EMH4301,4
8/31/2003	3.72308	VANADIUM	0	MG/L	0.01	FINAL50	MONTHLYCMP	MINERAL	EMH4301,4
8/31/2003	3.72308	ALUMINUM	0.116	MG/L	0.01	FINAL50	MONTHLYCMP	MINERAL	EMH4301,4
8/31/2003	3.72308	BORON	0.091	MG/L	0.01	FINAL50	MONTHLYCMP	MINERAL	EMH4301,4
8/31/2003	3.72308	CADMIUM	0.003	MG/L	0.003	FINAL50	MONTHLYCMP	MINERAL	EMH4301,4
8/31/2003	3.72308	COBALT	0	MG/L	0.0008	FINAL50	MONTHLYCMP	MINERAL	EMH4301,4
8/31/2003	3.72308	IRON	0.1	MG/L	0.01	FINAL50	MONTHLYCMP	MINERAL	EMH4301,4
8/31/2003	3.72308	NICKEL	0	MG/L	0.01	FINAL50	MONTHLYCMP	MINERAL	EMH4301,4
8/31/2003	3.72308	SELENIUM	0	MG/L	0.05	FINAL50	MONTHLYCMP	MINERAL	EMH4301,4
8/31/2003	3.72308	ZINC	0.02	MG/L	0.009	FINAL50	MONTHLYCMP	MINERAL	EMH4301,4
8/31/2003	3.72308	SODIUM	38	MG/L	4	FINAL50	MONTHLYCMP	MINERAL	EMH011,150
8/31/2003	3.72308	TOTAL CHROMIUM	0.001	MG/L	0.003	FINAL50	MONTHLYCMP	MINERAL	EMH4301,4
8/31/2003	3.72308	MAGNESIUM	0	MG/L	1	FINAL50	MONTHLYCMP	MINERAL	EMH4301,4
8/31/2003	3.72308	ARSENIC	0	MG/L	0.008	FINAL50	MONTHLYCMP	MINERAL	EMH4301,4
8/31/2003	3.72308	SILVER	0	MG/L	0.0003	FINAL50	MONTHLYCMP	MINERAL	EMH4301,4
8/31/2003	3.72308	BARIUM	0	MG/L	0.002	FINAL50	MONTHLYCMP	MINERAL	EMH4301,4
8/31/2003	3.72308	BERYLLIUM	0	MG/L	0.001	FINAL50	MONTHLYCMP	MINERAL	EMH4301,4
8/31/2003	3.72308	CALCIUM	0	MG/L	1	FINAL50	MONTHLYCMP	MINERAL	EMH4301,4
8/31/2003	3.72308	POTASSIUM	0	MG/L	1	FINAL50	MONTHLYCMP	MINERAL	EMH4301,4
8/31/2003	3.72308	SILICON	2	MG/L	1	FINAL50	MONTHLYCMP	MINERAL	EMH4301,4
8/31/2003	3.72308	Th-232	5E-14	CI/L	3E-14	FINAL50	MONTHLYCMP	RAD	WCB004,074
8/31/2003	3.72308	URANIUM	0	MG/L	0.0003	FINAL50	MONTHLYCMP	MINERAL	WCB004,075
8/31/2003	3.72308	U-235	0	CI/L	3E-15	FINAL50	MONTHLYCMP	RAD	WCB004,075
8/31/2003	3.72308	U-238	0	CI/L	1E-13	FINAL50	MONTHLYCMP	RAD	WCB004,075
8/31/2003	3.72308	U-234	0	CI/L	1.3E-12	FINAL50	MONTHLYCMP	RAD	WCB004,075
8/31/2003	3.72308	COD	37	MG/L	8	FINAL50	MONTHLYCMP	MINERAL	EMH002,67
8/31/2003	3.72308	CONDUCTIVITY	220	UMHO/CM	20	FINAL50	MONTHLYCMP	MINERAL	MCF0008,106
8/31/2003	3.72308	pH	7.47	UNITS	0.1	FINAL50	MONTHLYCMP	MINERAL	MCF0008,106
8/31/2003	3.72308	TSS	0	MG/L	4	FINAL50	MONTHLYCMP	MINERAL	MCF0002,112
8/31/2003	3.72308	TDS	0	MG/L	140	FINAL50	MONTHLYCMP	MINERAL	MCF0002,112
8/31/2003	3.72308	MERCURY	0.00004	MG/L	0.00002	FINAL50	MONTHLYCMP	MINERAL	EMH005,91
8/31/2003	3.72308	ALKALINITY-MO	87.6	MG/L	8.8	FINAL50	MONTHLYCMP	MINERAL	WCB002,16
8/31/2003	3.72308	ALKALINITY-P	0	MG/L	20	FINAL50	MONTHLYCMP	MINERAL	WCB002,16
8/31/2003	3.72308	HARDNESS	0	MG/L	6.615	FINAL50	MONTHLYCMP	MINERAL	DERIVED
8/31/2003	3.72308	Np-237	0	CI/L	1.1E-11	FINAL50	MONTHLYCMP	RAD	MCF0005,51
8/31/2003	3.72308	Cs-137	1.3E-11	CI/L	3E-12	FINAL50	MONTHLYCMP	RAD	MCF0005,51

NPDES Industrial Discharge Monitoring

051 8/11/03
FORM C
TTO

LANL Water Quality and Hydrology (ESH-18)

(THIS FORM TO ACCOMPANY SAMPLE - RESULTS TO BE RECORDED BY ANALYSIS LABORATORY-THEN RETURN WITH DATA PACKAGE)

FWO-WFM Sample Number
NPDES 0803.11

See attached
Rad screening data

COC TRACKING #
N-051C3007

(Use Forms in Numerical Order)

EPA Serial No.: EPA 051

TA/Building: TA-50-1 Rm 116

Date Sampled: 8-11-03

Flow: 72630 (liters/day)

estimated

Sampled by: TOM MORRISON

Discharge Description:

measured

color: CLEAR foam or floating solids: NONE odor: NONE

comments:

Monthly (Submit to ER-SMO)

TTO Samples Refrigerated

Analysis	Results/Concentration	Time Collected	Preserv. Added	Date Began	Time Began	Method	Analyzed By
TTO* (Use 40CFR433.11 list)	See Below	1425	HCl (VOC) <input checked="" type="checkbox"/>	----	----	See 40-CFR-136	

* Dioxin, Pesticides, PCBs not required in current LANL NPDES Permit

86092

TTO List

Compound	Result (µg/L)	Compound	Result (µg/L)	Compound	Result (µg/L)	Compound	Result (µg/L)
Method 625A Semivolatile	(U) ND	Benzyl butyl phthalate	(U) ND	Hexachlorocyclopentadien	(u) ND	2-Chloroethyl vinyl ether	(U) ND
Parachlorometa cresol		Bis (2-Chloroethyl) ether		Hexachloroethane		Chloroform (J)	0.000655
2-Chlorophenol		Bis (2-Chloroethoxy) Methane		Indeno (1,2,3-cd) pyrene		Chloromethane	(u) ND
2,4-Dichlorophenol		Bis (2-Ethylhexyl) phthalate		Isophorone		Chlorodibromomethane	
2,4-Dimethylphenol		Bis (2-Chloroisopropyl) ether		Naphthalene		1,2-Dichlorobenzene	
2,4-Dinitrophenol		4-Bromophenyl phenyl ether		Nitrobenzene		1,3-Dichlorobenzene	
2-Methyl-4,6-dinitrophenol		2-Chloronaphthalene		N-Nitrosodimethylamine		1,4-Dichlorobenzene	
2-Nitrophenol		4-Chlorophenyl phenyl ether		N-Nitrosodi-n-propylamine		1,1-Dichloroethane	
4-Nitrophenol		Chrysene		N-Nitrosodiphenylamine		1,2-Dichloroethane	
Pentachlorophenol		Dibenzo (a,h) Anthracene		Phenanthrene		1,1-Dichloroethylene	
Phenol		Di-N-Butylphthalate		Pyrene		1,2-Trans-chloroethylene	
2,4,6-Trichlorophenol		3,3'-Dichlorobenzidine		1,2,4-Trichlorobenzene		1,2-Dichloropropane	
Method 625B Semivolatile		Diethyl phthalate		Method 624 Volatile Organics		1,3-Dichloropropene	
Acenaphthene		Dimethyl phthalate		Acrolein		Ethyl benzene	
Acenaphthylene		2,4-Dinitrotoluene		Acrylonitrile		Methylene chloride	
Anthracene		2,6-Dinitrotoluene		Benzene		1,1,2,2-Tetrachloroethane	
Benzidine		Di-n-octyl phthalate		Dichlorobromomethane		Tetrachloroethylene	
Benzo (a) anthracene		1,2-Diphenylhydrazine		Bromoform		1,1,1-Trichloroethane	
Benzo (b) fluoranthene		Fluoranthene		Bromomethane		Trichloroethylene	
Benzo (k) fluoranthene		Fluorene		Carbon tetrachloride		1,1,2-Trichloroethane	
Benzo (a) pyrene		Hexachlorobenzene		Chlorobenzene		Toluene	
Benzo (g,h,i) Perylene		Hexachlorobutadiene		Chloroethane		Vinyl chloride	

See Reverse For Chain-of Custody/Containers

W 9/24/03

Outfall No. EPA051

Chain-Of-Custody Record

Relinquished By (Signature) & Org.	Date	Time	Received By (Signature) & Org.
<i>Thomas O. Moore</i>	8-13-03	1358	<i>[Signature]</i>
	8-14-03	0915	<i>Mike Hunter</i>

Containers

Quantity	Volume/Type	Preservative	Parameter
4	1 liter amber glass	None	TTO (SVOC)
2	40 ml glass vial	HCl	VOC
2	40 ml glass vial	None	2-Chloroethyl-vinyl ether

WS

051 8/11/03

e-mail

SV0A

Certificate of Analysis

Company : Los Alamos National Labs
 Address : MS K497 ESH-18
 Water Quality & Hydrology
 Los Alamos, New Mexico 87545
 Contact: Billy Turney
 Project: NPDES Monitoring - Site 051

Report Date: August 21, 2003

Page 1 of 4

W7
 9/5/03

Client Sample ID: NPDES0803.11
 Sample ID: 86092002
 Matrix: Waste Water
 Collect Date: 11-AUG-03
 Receive Date: 14-AUG-03
 Collector: Client
 Project: ESHL00102
 Client ID: ESHL001

Parameter	Qualifier	Result	Permit Limit	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Semi-volatile Mass spec Organics Federal												
3510/62STTO in Liquid-Federal												
1,2,4-Trichlorobenzene	U	ND	0.000789	0.0111	0.0111	mg/L	1	KGB1	08/19/03	1507	270765	1
1,2-Diphenylhydrazine	U	ND	0.000956	0.0111	0.0111	mg/L	1					
2,4,6-Trichlorophenol	U	ND	0.000433	0.0111	0.0111	mg/L	1					
2,4-Dichlorophenol	U	ND	0.000522	0.0111	0.0111	mg/L	1					
2,4-Dimethylphenol	U	ND	0.000522	0.0111	0.0111	mg/L	1					
2,4-Dinitrophenol	U	ND	0.00556	0.0222	0.0222	mg/L	1					
2,4-Dinitrotoluene	U	ND	0.000778	0.0111	0.0111	mg/L	1					
2,6-Dinitrotoluene	U	ND	0.000556	0.0111	0.0111	mg/L	1					
Chloronaphthalene	U	ND	0.000444	0.00111	0.00111	mg/L	1					
1-Chlorophenol	U	ND	0.000456	0.0111	0.0111	mg/L	1					
2-Methyl-4,6-dinitrophenol	U	ND	0.00111	0.0111	0.0111	mg/L	1					
2-Nitrophenol	U	ND	0.000656	0.0111	0.0111	mg/L	1					
3,3'-Dichlorobenzidine	U	ND	0.000567	0.0111	0.0111	mg/L	1					
4-Bromophenylphenylether	U	ND	0.00136	0.0111	0.0111	mg/L	1					
4-Chlorophenylphenylether	U	ND	0.000933	0.0111	0.0111	mg/L	1					
4-Nitrophenol	U	ND	0.00556	0.0111	0.0111	mg/L	1					
Acenaphthene	U	ND	0.000556	0.00111	0.00111	mg/L	1					
Acenaphthylene	U	ND	0.000556	0.00111	0.00111	mg/L	1					
Anthracene	U	ND	0.000556	0.00111	0.00111	mg/L	1					
Benzidine	U	ND	0.00556	0.0556	0.0556	mg/L	1					
Benzo(a)anthracene	U	ND	0.000556	0.00111	0.00111	mg/L	1					
Benzo(a)pyrene	U	ND	0.000556	0.00111	0.00111	mg/L	1					
Benzo(b)fluoranthene	U	ND	0.000556	0.00111	0.00111	mg/L	1					
Benzo(ghi)perylene	U	ND	0.000556	0.00111	0.00111	mg/L	1					
Benzo(k)fluoranthene	U	ND	0.000556	0.00111	0.00111	mg/L	1					
Butylbenzylphthalate	U	ND	0.000756	0.0111	0.0111	mg/L	1					
Chrysene	U	ND	0.000556	0.00111	0.00111	mg/L	1					
Di-n-butylphthalate	U	ND	0.00111	0.0111	0.0111	mg/L	1					
Di-n-octylphthalate	U	ND	0.000967	0.0111	0.0111	mg/L	1					
Dibenzo(a,h)anthracene	U	ND	0.000556	0.00111	0.00111	mg/L	1					
Diethylphthalate	U	ND	0.000989	0.0111	0.0111	mg/L	1					
Dimethylphthalate	U	ND	0.000589	0.0111	0.0111	mg/L	1					
Diphenylamine	U	ND	0.000878	0.0111	0.0111	mg/L	1					
Fluoranthene	U	ND	0.000556	0.00111	0.00111	mg/L	1					
Fluorene	U	ND	0.000556	0.00111	0.00111	mg/L	1					
Hexachlorobenzene	U	ND	0.000722	0.0111	0.0111	mg/L	1					
Hexachlorobutadiene	U	ND	0.000356	0.0111	0.0111	mg/L	1					
Hexachlorocyclopentadiene	U	ND	0.00111	0.0111	0.0111	mg/L	1					

nitrosodiphenylamine

GENERAL ENGINEERING LABORATORIES, LLC
 2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

e-mail

051 8/11/03

Certificate of Analysis

SVOA/WOA

Company : Los Alamos National Labs
 Address : MS K497 ESH-18
 Water Quality & Hydrology
 Los Alamos, New Mexico 87545
 Contact: Billy Turney
 Project: NPDES Monitoring - Site 051

WA
 9/3/03

Report Date: August 21, 2003

Page 2 of 4

Client Sample ID: NPDES0803.11
 Sample ID: 86092002

Project: ESHL00102
 Client ID: ESHL001

Parameter	Qualifier	Result	Permit Limit	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Semi-volatile Mass spec Organics Federal												
<i>3510/625 TTO in Liquid-Federal</i>												
Hexachloroethane	U	ND	0.000478	0.0111		mg/L	1					
Indeno(1,2,3-cd)pyrene	U	ND	0.000556	0.00111		mg/L	1					
Isophorone	U	ND	0.000656	0.0111		mg/L	1					
N-Methyl-N-nitrosomethylamine	U	ND	0.00556	0.0111		mg/L	1					
N-Nitrosodipropylamine	U	ND	0.000833	0.0111		mg/L	1					
Naphthalene	U	ND	0.000122	0.00111		mg/L	1					
Nitrobenzene	U	ND	0.0007	0.0111		mg/L	1					
4-Chloro-3-methylphenol	U	ND	0.000767	0.0111		mg/L	1					
Pentachlorophenol	U	ND	0.00556	0.0111		mg/L	1					
Phenanthrene	U	ND	0.000556	0.00111		mg/L	1					
Phenol	U	ND	0.000333	0.0111		mg/L	1					
Pyrene	U	ND	0.000556	0.00111		mg/L	1					
Bis(2-Chloroethoxy)methane	U	ND	0.000533	0.0111		mg/L	1					
Bis(2-Chloroethyl) ether	U	ND	0.00152	0.0111		mg/L	1					
Bis(2-Chloroisopropyl) ether	U	ND	0.000889	0.0111		mg/L	1					
Bis(2-Ethylhexyl) phthalate	U	ND	0.00144	0.0111		mg/L	1					
Volatile Organics Federal												
<i>EPA 624 TTO Liquid Federal - DOE AL</i>												
1,1,1-Trichloroethane	U	ND	0.00034	0.001		mg/L	1	MAP	08/15/03	1900	270943	2
1,1,2,2-Tetrachloroethane	U	ND	0.00049	0.001		mg/L	1					
1,1,2-Trichloroethane	U	ND	0.00044	0.001		mg/L	1					
1,1-Dichloroethane	U	ND	0.00041	0.001		mg/L	1					
1,1-Dichloroethylene	U	ND	0.00041	0.001		mg/L	1					
1,2-Dichlorobenzene	U	ND	0.00036	0.001		mg/L	1					
1,2-Dichloroethane	U	ND	0.00029	0.001		mg/L	1					
1,2-Dichloropropane	U	ND	0.00025	0.001		mg/L	1					
1,3-Dichlorobenzene	U	ND	0.00033	0.001		mg/L	1					
1,4-Dichlorobenzene	U	ND	0.00025	0.001		mg/L	1					
2-Chloroethylvinyl ether	U	ND	0.00125	0.005		mg/L	1					
Acrolein	U	ND	0.00406	0.005		mg/L	1					
Acrylonitrile	U	ND	0.002	0.005		mg/L	1					
Benzene	U	ND	0.00033	0.001		mg/L	1					
Bromodichloromethane	U	ND	0.00038	0.001		mg/L	1					
Bromoform	U	ND	0.0005	0.001		mg/L	1					
Bromomethane	U	ND	0.0005	0.001		mg/L	1					
Carbon tetrachloride	U	ND	0.00029	0.001		mg/L	1					
Chlorobenzene	U	ND	0.00032	0.001		mg/L	1					
Chloroethane	U	ND	0.0005	0.001		mg/L	1					
Chloroform	J	0.000655	0.00036	0.001		mg/L	1					
Chloromethane	U	ND	0.0005	0.001		mg/L	1					
Dibromochloromethane	U	ND	0.00029	0.001		mg/L	1					

051 8/11/03
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Certificate of Analysis

Company : Los Alamos National Labs
 Address : MS K497 ESH-18
 Water Quality & Hydrology
 Los Alamos, New Mexico 87545
 Contact : Billy Turney
 Project : NPDES Monitoring - Site 051

dm
 8/5/03

Report Date: August 21, 2003

Page 3 of 4

Client Sample ID: NPDES0803.11 Project: ESHL00102
 Sample ID: 86092002 Client ID: ESHL001

Parameter	Qualifier	Result	Permit Limit	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Volatile Organics Federal												
<i>EPA 624 TTO Liquid Federal - DOE AL</i>												
Ethylbenzene	U	ND		0.00021	0.001	mg/L						
Methylene chloride	U	ND		0.00033	0.005	mg/L						
Tetrachloroethylene	U	ND		0.00033	0.001	mg/L						
Toluene	U	ND		0.00039	0.001	mg/L						
Trichloroethylene	U	ND		0.00036	0.001	mg/L						
Vinyl chloride	U	ND		0.00055	0.001	mg/L						
cis-1,3-Dichloropropylene	U	ND		0.00003	0.001	mg/L						
trans-1,2-Dichloroethylene	U	ND		0.00037	0.001	mg/L						
trans-1,3-Dichloropropylene	U	ND		0.00029	0.001	mg/L						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-EPA 625 Analysis Fed	JPB	08/15/03	1400	270762

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 625	
2	EPA 624 DOE-AL	

Surrogate recovery	Test	Recovery %	Acceptable Limits
2,4,6-Tribromophenol	3510/625TTO in Liquid-Federal	72%	(35%-123%)
2-Fluorobiphenyl	3510/625TTO in Liquid-Federal	61%	(43%-107%)
2-Fluorophenol	3510/625TTO in Liquid-Federal	42%	(20%-68%)
Nitrobenzene-d5	3510/625TTO in Liquid-Federal	67%	(26%-125%)
Phenol-d5	3510/625TTO in Liquid-Federal	29%	(9%-53%)
p-Terphenyl-d14	3510/625TTO in Liquid-Federal	86%	(31%-127%)
Bromofluorobenzene	EPA 624 TTO Liquid Federal - DC	99%	(69%-137%)
Dibromofluoromethane	EPA 624 TTO Liquid Federal - DC	101%	(74%-144%)
Toluene-d8	EPA 624 TTO Liquid Federal - DC	96%	(76%-129%)

Notes:

The Qualifiers in this report are defined as follows :

- < Result is less than amount reported.
- > Result is greater than amount reported.
- B Target analyte was detected in the sample as well as the associated blank.
- Flag for results below the MDC or a flag for low tracer recovery.

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company : Los Alamos National Labs
Address : MS K497 ESH-18
Water Quality & Hydrology
Los Alamos, New Mexico 87545
Contact: Billy Turney
Project: NPDES Monitoring - Site 051

Report Date: August 21, 2003

Page 4 of 4

Client Sample ID: NPDES0803.11
Sample ID: 86092002

Project: ESHL00102
Client ID: ESHL001

Parameter	Qualifier	Result	Permit Limit	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
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- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on an "as received" basis.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Stacy Griffin.

Reviewed by



GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: August 21, 2003

Page 1 of 11

Client : Los Alamos National Labs
 MS K497 ESH-18
 Water Quality & Hydrology
 Los Alamos, New Mexico

Contact: Billy Turney

Workorder: 86092

Paramname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS Federal										
Batch 270840										
QC1200474158 85759001 DUP										
Chromium		0.166	U	ND	ug/L	N/A		(+/-3.00)	BAJ	08/16/03 15:08
Copper		1.76		1.89	ug/L	7 ^		(+/-1.00)		
Lead	J	0.144	J	0.131	ug/L	N/A ^		(+/-2.00)		
Nickel		2.04		2.06	ug/L	1 ^		(+/-2.00)		
Zinc		2.68	J	2.18	ug/L	N/A ^		(+/-10.0)		
Cadmium	U	ND	U	ND	ug/L	N/A		(+/-1.00)		
QC1200474162 1.CS										
Chromium	50.0			52.1	ug/L		104	(85%-115%)		08/16/03 14:56
Copper	50.0			53.6	ug/L		107	(85%-115%)		
Lead	50.0			52.5	ug/L		105	(85%-115%)		
Nickel	50.0			52.4	ug/L		105	(85%-115%)		
Zinc	50.0			52.4	ug/L		105	(85%-115%)		
Cadmium	50.0			50.3	ug/L		101	(85%-115%)		
QC1200474157 MB										
Chromium			U	ND	ug/L					08/16/03 14:50
Copper			J	0.299	ug/L					
Lead			U	ND	ug/L					
Nickel			U	ND	ug/L					
Zinc			U	ND	ug/L					
Cadmium			U	ND	ug/L					
QC1200474160 85759001 MS										
Chromium	50.0	0.166		51.1	ug/L		102	(75%-125%)		08/16/03 15:14
Copper	50.0	1.76		54.5	ug/L		105	(75%-125%)		
Lead	20.0	0.144	J	21.7	ug/L		108	(75%-125%)		
Nickel	50.0	2.04		53.8	ug/L		104	(75%-125%)		
Zinc	50.0	2.68		52.6	ug/L		100	(75%-125%)		
Cadmium	5.00	ND	U	6.10	ug/L		122	(75%-125%)		
QC1200474161 85759001 MSD										
Chromium	50.0	0.166		50.7	ug/L	1	101	(0%-20%)		08/16/03 15:20
Copper	50.0	1.76		54.0	ug/L	1	105	(0%-20%)		
Lead	20.0	0.144	J	21.2	ug/L	2	105	(0%-20%)		
Nickel	50.0	2.04		52.7	ug/L	2	101	(0%-20%)		
Zinc	50.0	2.68		52.8	ug/L	0	100	(0%-20%)		
Cadmium	5.00	ND	U	6.05	ug/L	1	121	(0%-20%)		
QC1200474159 85759001 SDILT										
Chromium		0.166	U	ND	ug/L	N/A				08/16/03 15:26
Copper		1.76	J	0.749	ug/L	113				
Lead		0.144	U	ND	ug/L	N/A				
Nickel		2.04	J	0.412	ug/L	1.08				
Zinc		2.68	U	ND	ug/L	N/A				
Cadmium		ND	U	ND	ug/L	N/A				
Metals Analysis-Mercury Federal										

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QC Summary

Workorder: 86092

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-Mercury Federal											
Batch 270808											
QC1200474061	86092001	DUP									
Mercury		U	ND	U	ND	ug/L	N/A	(+/-0.200)	NOR1	08/20/03	11:58
QC1200474060	LCS										
Mercury	2.00				2.11	ug/L	105	(85%-115%)		08/20/03	11:54
QC1200474059	MB										
Mercury				U	ND	ug/L				08/20/03	11:52
QC1200474062	86092001	MS									
Mercury	2.00	U	ND		2.05	ug/L	102	(75%-125%)		08/20/03	12:00
Semi-Volatiles-GC/MS Federal											
Batch 270765											
QC1200473957	LCS										
1,2,4-Trichlorobenzene	0.100				0.0689	mg/L	69	(53%-96%)	KGB1	08/20/03	08:30
2,4,6-Trichlorophenol	0.100				0.0903	mg/L	90	(58%-107%)			
2,4-Dichlorophenol	0.100				0.0815	mg/L	82	(58%-96%)			
2,4-Dimethylphenol	0.100				0.0759	mg/L	76	(32%-106%)			
2,4-Dinitrophenol	0.100				0.112	mg/L	112	(31%-143%)			
2,4-Dinitrotoluene	0.100				0.0962	mg/L	96	(61%-118%)			
2,6-Dinitrotoluene	0.100				0.0945	mg/L	95	(71%-109%)			
2-Chloronaphthalene	0.100				0.0811	mg/L	81	(64%-98%)			
2-Chlorophenol	0.100				0.0799	mg/L	80	(49%-94%)			
2-Methyl-4,6-dinitrophenol	0.100				0.113	mg/L	113	(36%-142%)			
3-Nitrophenol	0.100				0.0808	mg/L	81	(56%-102%)			
1,3-Dichlorobenzidine	0.100				0.0884	mg/L	88	(31%-131%)			
4-Bromophenylphenylether	0.100				0.0943	mg/L	94	(67%-116%)			
4-Chlorophenylphenylether	0.100				0.0851	mg/L	85	(59%-109%)			
4-Nitrophenol	0.100				0.0424	mg/L	42	(16%-48%)			
Acenaphthene	0.100				0.0798	mg/L	80	(63%-112%)			
Acenaphthylene	0.100				0.0755	mg/L	76	(56%-98%)			
Anthracene	0.100				0.0823	mg/L	82	(67%-106%)			
Benzidine	0.100			J	0.0267	mg/L	27	(10%-150%)			
Benzo(a)anthracene	0.100				0.0837	mg/L	84	(69%-104%)			
Benzo(a)pyrene	0.100				0.0859	mg/L	86	(63%-109%)			
Benzo(b)fluoranthene	0.100				0.0898	mg/L	90	(66%-116%)			
Benzo(ghi)perylene	0.100				0.054	mg/L	54	(45%-128%)			
Benzo(k)fluoranthene	0.100				0.0998	mg/L	100	(62%-119%)			
Butylbenzylphthalate	0.100				0.098	mg/L	98	(59%-123%)			
Chrysene	0.100				0.0781	mg/L	78	(68%-105%)			
Di-n-butylphthalate	0.100				0.0905	mg/L	91	(65%-112%)			
Di-n-octylphthalate	0.100			E	0.126	mg/L	126	(47%-130%)			
Dibenzo(a,h)anthracene	0.100				0.0664	mg/L	66	(46%-125%)			
Diethylphthalate	0.100				0.0817	mg/L	82	(60%-110%)			
Dimethylphthalate	0.100				0.0837	mg/L	84	(64%-105%)			
Diphenylamine	0.100				0.0871	mg/L	87	(63%-111%)			
Fluoranthene	0.100				0.0846	mg/L	85	(65%-110%)			
Fluorene	0.100				0.0785	mg/L	79	(65%-109%)			
Hexachlorobenzene	0.100				0.0885	mg/L	89	(66%-106%)			
Hexachlorobutadiene	0.100				0.0638	mg/L	64	(43%-97%)			
Hexachlorocyclopentadiene	0.100				0.0726	mg/L	73	(20%-107%)			

GENERAL ENGINEERING LABORATORIES, LLC

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QC Summary

Workorder: 86092

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatiles-GC/MS Federal											
Batch 270765											
Hexachloroethane	0.100			0.0667	mg/L		67	(45%-95%)			
Indeno(1,2,3-cd)pyrene	0.100			0.0607	mg/L		61	(46%-126%)			
Isophorone	0.100			0.0744	mg/L		74	(59%-102%)			
N-Methyl-N-nitrosomethylamine	0.100			0.0553	mg/L		55	(10%-150%)			
N-Nitrosodi-n-propylamine	0.100			0.0816	mg/L		82	(52%-111%)			
Naphthalene	0.100			0.062	mg/L		62	(52%-99%)			
Nitrobenzene	0.100			0.0752	mg/L		75	(56%-106%)			
Parachlorometa cresol	0.100			0.091	mg/L		91	(54%-103%)			
Pentachlorophenol	0.100			0.102	mg/L		102	(38%-120%)			
Phenanthrene	0.100			0.0797	mg/L		80	(66%-105%)			
Phenol	0.100			0.0371	mg/L		37	(18%-45%)			
Pyrene	0.100			0.0896	mg/L		90	(52%-127%)			
bis(2-Chloroethoxy)methane	0.100			0.064	mg/L		64	(47%-102%)			
bis(2-Chloroethyl) ether	0.100			0.065	mg/L		65	(38%-100%)			
bis(2-Chloroisopropyl)ether	0.100			0.0693	mg/L		69	(49%-103%)			
bis(2-Ethylhexyl)phthalate	0.100			0.105	mg/L		105	(61%-123%)			
**2,4,6-Tribromophenol	0.100			0.0965	mg/L		97	(35%-123%)			
**2-Fluorobiphenyl	0.050			0.037	mg/L		74	(43%-107%)			
**2-Fluorophenol	0.100			0.0495	mg/L		50	(20%-68%)			
**Nitrobenzene-d5	0.050			0.0368	mg/L		74	(26%-125%)			
phenol-d5	0.100			0.0344	mg/L		34	(9%-53%)			
terphenyl-d14	0.050			0.0472	mg/L		94	(31%-127%)			
QC1200473956											
1,2,4-Trichlorobenzene			U	ND	mg/L						08/19/03 14:24
1,2-Diphenylhydrazine			U	ND	mg/L						
2,4,6-Trichlorophenol			U	ND	mg/L						
2,4-Dichlorophenol			U	ND	mg/L						
2,4-Dimethylphenol			U	ND	mg/L						
2,4-Dinitrophenol			U	ND	mg/L						
2,4-Dinitrotoluene			U	ND	mg/L						
2,6-Dinitrotoluene			U	ND	mg/L						
2-Chloronaphthalene			U	ND	mg/L						
2-Chlorophenol			U	ND	mg/L						
2-Methyl-4,6-dinitrophenol			U	ND	mg/L						
2-Nitrophenol			U	ND	mg/L						
3,3'-Dichlorobenzidine			U	ND	mg/L						
4-Bromophenylphenylether			U	ND	mg/L						
4-Chlorophenylphenylether			U	ND	mg/L						
4-Nitrophenol			U	ND	mg/L						
Acenaphthene			U	ND	mg/L						
Acenaphthylene			U	ND	mg/L						
Anthracene			U	ND	mg/L						
Benzidine			U	ND	mg/L						
Benzo(a)anthracene			U	ND	mg/L						
Benzo(a)pyrene			U	ND	mg/L						
Benzo(b)fluoranthene			U	ND	mg/L						
Benzo(ghi)perylene			U	ND	mg/L						
Benzo(k)fluoranthene			U	ND	mg/L						

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QC Summary

Workorder: 86092

Page 4 of 11

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatiles-GC/MS Federal											
Batch 270765											
Butylbenzylphthalate			U	ND	mg/L						
Chrysene			U	ND	mg/L						
Di-n-butylphthalate			U	ND	mg/L						
Di-n-octylphthalate			U	ND	mg/L						
Dibenzo(a,h)anthracene			U	ND	mg/L						
Diethylphthalate			U	ND	mg/L						
Dimethylphthalate			U	ND	mg/L						
Diphenylamine			U	ND	mg/L						
Fluoranthene			U	ND	mg/L						
Fluorene			U	ND	mg/L						
Hexachlorobenzene			U	ND	mg/L						
Hexachlorobutadiene			U	ND	mg/L						
Hexachlorocyclopentadiene			U	ND	mg/L						
Hexachloroethane			U	ND	mg/L						
Indeno(1,2,3-cd)pyrene			U	ND	mg/L						
Isophorone			U	ND	mg/L						
N-Methyl-N-nitrosomethylamine			U	ND	mg/L						
N-Nitrosodi-n-propylamine			U	ND	mg/L						
Naphthalene			U	ND	mg/L						
Nitrobenzene			U	ND	mg/L						
1,2-Dichlorometa cresol			U	ND	mg/L						
1,2-Dichlorophenol			U	ND	mg/L						
1-Methylnaphthalene			U	ND	mg/L						
Phenol			U	ND	mg/L						
Pyrene			U	ND	mg/L						
bis(2-Chloroethoxy)methane			U	ND	mg/L						
bis(2-Chloroethyl) ether			U	ND	mg/L						
bis(2-Chloroisopropyl)ether			U	ND	mg/L						
bis(2-Ethylhexyl)phthalate			U	ND	mg/L						
**2,4,6-Tribromophenol	0.100			0.0717	mg/L		72	(35%-123%)			
**2-Fluorobiphenyl	0.050			0.0341	mg/L		68	(43%-107%)			
**2-Fluorophenol	0.100			0.0503	mg/L		50	(20%-68%)			
**Nitrobenzene-d5	0.050			0.0422	mg/L		84	(26%-125%)			
**Phenol-d5	0.100			0.0334	mg/L		33	(9%-53%)			
**p-Terphenyl-d14	0.050			0.044	mg/L		88	(31%-127%)			
QC1200473958 86092002 MS											
1,2,4-Trichlorobenzene	0.200	U	ND	0.123	mg/L		61	(44%-108%)		08/19/03	15:29
2,4,6-Trichlorophenol	0.200	U	ND	0.183	mg/L		91	(41%-120%)			
2,4-Dichlorophenol	0.200	U	ND	0.169	mg/L		84	(42%-109%)			
2,4-Dimethylphenol	0.200	U	ND	0.123	mg/L		61	(27%-111%)			
2,4-Dinitrophenol	0.200	U	ND	E 0.282	mg/L		141	(32%-145%)			
2,4-Dinitrotoluene	0.200	U	ND	0.196	mg/L		98	(44%-127%)			
2,6-Dinitrotoluene	0.200	U	ND	0.189	mg/L		94	(52%-122%)			
2-Chloronaphthalene	0.200	U	ND	0.160	mg/L		80	(49%-108%)			
2-Chlorophenol	0.200	U	ND	0.170	mg/L		85	(39%-105%)			
2-Methyl-4,6-dinitrophenol	0.200	U	ND	0.238	mg/L		119	(27%-142%)			
2-Nitrophenol	0.200	U	ND	0.164	mg/L		82	(37%-120%)			
3,3'-Dichlorobenzidine	0.200	U	ND	I 0.00926	mg/L		5*	(18%-128%)			

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Semi-Volatiles-GC/MS Federal Batch 270765										
4-Bromophenylphenylether	0.200	U	ND	0.191	mg/L		96	(51%-127%)		
4-Chlorophenylphenylether	0.200	U	ND	0.176	mg/L		88	(46%-122%)		
4-Nitrophenol	0.200	U	ND	0.139	mg/L		70	(10%-88%)		
Acenaphthenc	0.200	U	ND	0.165	mg/L		83	(52%-119%)		
Acenaphthylene	0.200	U	ND	0.149	mg/L		75	(47%-102%)		
Anthracenc	0.200	U	ND	0.163	mg/L		82	(54%-114%)		
Benzidine	0.200	U	ND	ND	mg/L		0*	(10%-150%)		
Benzo(a)anthracenc	0.200	U	ND	0.167	mg/L		83	(51%-116%)		
Benzo(a)pyrene	0.200	U	ND	0.177	mg/L		89	(50%-117%)		
Benzo(b)fluoranthenc	0.200	U	ND	0.183	mg/L		91	(51%-125%)		
Benzo(ghi)pcrylene	0.200	U	ND	0.155	mg/L		78	(35%-133%)		
Benzo(k)fluoranthenc	0.200	U	ND	0.176	mg/L		88	(48%-129%)		
Butylbenzylphthalate	0.200	U	ND	0.204	mg/L		102	(46%-135%)		
Chrysenc	0.200	U	ND	0.165	mg/L		83	(56%-113%)		
Di-n-butylphthalate	0.200	U	ND	0.173	mg/L		86	(52%-122%)		
Di-n-octylphthalate	0.200	U	ND	0.223	mg/L		112	(44%-131%)		
Dibenzo(a,h)anthracenc	0.200	U	ND	0.178	mg/L		89	(39%-129%)		
Diethylphthalate	0.200	U	ND	0.169	mg/L		84	(49%-118%)		
Dimethylphthalate	0.200	U	ND	0.170	mg/L		85	(53%-113%)		
Diphenylamine	0.200	U	ND	0.168	mg/L		84	(44%-122%)		
Fluoranthene	0.200	U	ND	0.172	mg/L		86	(49%-120%)		
Fluorene	0.200	U	ND	0.164	mg/L		82	(57%-112%)		
Hexachlorobenzene	0.200	U	ND	0.174	mg/L		87	(49%-117%)		
Hexachlorobutadiene	0.200	U	ND	0.110	mg/L		55	(35%-108%)		
Hexachlorocyclopentadiene	0.200	U	ND	0.157	mg/L		78	(11%-120%)		
Hexachloroethane	0.200	U	ND	0.107	mg/L		54	(36%-102%)		
Indeno(1,2,3-cd)pyrene	0.200	U	ND	0.161	mg/L		81	(39%-131%)		
Isophoronc	0.200	U	ND	0.150	mg/L		75	(52%-109%)		
N-Methyl-N-nitrosomethylamine	0.200	U	ND	0.145	mg/L		73	(10%-150%)		
N-Nitrosodi-n-propylamine	0.200	U	ND	0.169	mg/L		85	(47%-115%)		
Naphthalene	0.200	U	ND	0.119	mg/L		59	(48%-103%)		
Nitrobenzene	0.200	U	ND	0.158	mg/L		79	(46%-120%)		
Parachlorometa cresol	0.200	U	ND	0.179	mg/L		89	(43%-116%)		
Pentachlorophenol	0.200	U	ND	0.209	mg/L		104	(28%-134%)		
Phenanthrene	0.200	U	ND	0.158	mg/L		79	(57%-110%)		
Phenol	0.200	U	ND	0.113	mg/L		57	(17%-73%)		
Pyrene	0.200	U	ND	0.184	mg/L		92	(36%-138%)		
bis(2-Chloroethoxy)methane	0.200	U	ND	0.130	mg/L		65	(38%-108%)		
bis(2-Chloroethyl) ether	0.200	U	ND	0.128	mg/L		64	(32%-102%)		
bis(2-Chloroisopropyl)ether	0.200	U	ND	0.142	mg/L		71	(38%-110%)		
bis(2-Ethylhexyl)phthalate	0.200	U	ND	0.214	mg/L		107	(50%-131%)		
**2,4,6-Tribromophenol	0.200		0.0796	0.191	mg/L		96	(35%-123%)		
**2-Fluorobiphenyl	0.100		0.0341	0.078	mg/L		78	(43%-107%)		
**2-Fluorophenol	0.200		0.047	0.125	mg/L		63	(20%-68%)		
**Nitrobenzene-d5	0.100		0.0372	0.0755	mg/L		76	(26%-125%)		
**Phenol-d5	0.200		0.0325	0.105	mg/L		53	(9%-53%)		
**p-Terphenyl-d14	0.100		0.0477	0.0982	mg/L		98	(31%-127%)		

QC1200473959 86092002 MSD

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatiles-GC/MS Federal Batch 270765											
1,2,4-Trichlorobenzene	0.200	U	ND	0.125	mg/L	2	62	(0%-30%)			
2,4,6-Trichlorophenol	0.200	U	ND	0.186	mg/L	2	93	(0%-23%)			
2,4-Dichlorophenol	0.200	U	ND	0.168	mg/L	0	84	(0%-30%)			
2,4-Dimethylphenol	0.200	U	ND	0.123	mg/L	0	62	(0%-26%)			
2,4-Dinitrophenol	0.200	U	ND	E	0.266	mg/L	6	133	(0%-28%)		
2,4-Dinitrotoluene	0.200	U	ND	0.214	mg/L	9	107	(0%-30%)			
2,6-Dinitrotoluene	0.200	U	ND	0.200	mg/L	6	100	(0%-30%)			
2-Chloronaphthalene	0.200	U	ND	0.158	mg/L	2	79	(0%-30%)			
2-Chlorophenol	0.200	U	ND	0.168	mg/L	1	84	(0%-20%)			
2-Methyl-4,6-dinitrophenol	0.200	U	ND	E	0.257	mg/L	7	128	(0%-31%)		
2-Nitrophenol	0.200	U	ND	0.161	mg/L	2	81	(0%-21%)			
3,3'-Dichlorobenzidine	0.200	U	ND	J	0.00557	mg/L	50*	3	(0%-24%)		
4-Bromophenylphenylether	0.200	U	ND	0.195	mg/L	2	98	(0%-20%)			
4-Chlorophenylphenylether	0.200	U	ND	0.180	mg/L	2	90	(0%-30%)			
4-Nitrophenol	0.200	U	ND	0.152	mg/L	9	76	(0%-31%)			
Acenaphthene	0.200	U	ND	0.171	mg/L	3	85	(0%-22%)			
Acenaphthylene	0.200	U	ND	0.157	mg/L	5	78	(0%-30%)			
Anthracene	0.200	U	ND	0.176	mg/L	8	88	(0%-30%)			
Benzidine	0.200	U	ND	U	ND	mg/L	0	0	(0%-30%)		
Benzo(a)anthracene	0.200	U	ND	0.178	mg/L	6	89	(0%-30%)			
Benzo(a)pyrene	0.200	U	ND	0.191	mg/L	7	95	(0%-30%)			
Benzo(b)fluoranthene	0.200	U	ND	0.192	mg/L	5	96	(0%-25%)			
Benzo(ghi)perylene	0.200	U	ND	0.152	mg/L	2	76	(0%-28%)			
Benzo(k)fluoranthene	0.200	U	ND	0.202	mg/L	14	101	(0%-25%)			
Butylbenzylphthalate	0.200	U	ND	0.206	mg/L	1	103	(0%-25%)			
Chrysene	0.200	U	ND	0.179	mg/L	8	89	(0%-30%)			
Di-n-butylphthalate	0.200	U	ND	0.198	mg/L	14	99	(0%-21%)			
Di-n-octylphthalate	0.200	U	ND	0.237	mg/L	6	118	(0%-30%)			
Dibenzo(a,h)anthracene	0.200	U	ND	0.174	mg/L	2	87	(0%-27%)			
Diethylphthalate	0.200	U	ND	0.177	mg/L	5	88	(0%-30%)			
Dimethylphthalate	0.200	U	ND	0.178	mg/L	4	89	(0%-21%)			
Diphenylamine	0.200	U	ND	0.175	mg/L	4	87	(0%-25%)			
Fluoranthene	0.200	U	ND	0.192	mg/L	11	96	(0%-22%)			
Fluorene	0.200	U	ND	0.172	mg/L	5	86	(0%-30%)			
Hexachlorobenzene	0.200	U	ND	0.185	mg/L	6	93	(0%-30%)			
Hexachlorobutadiene	0.200	U	ND	0.109	mg/L	1	55	(0%-30%)			
Hexachlorocyclopentadiene	0.200	U	ND	0.149	mg/L	5	74	(0%-34%)			
Hexachloroethane	0.200	U	ND	0.113	mg/L	5	57	(0%-21%)			
Indeno(1,2,3-cd)pyrene	0.200	U	ND	0.166	mg/L	3	83	(0%-26%)			
Isophorone	0.200	U	ND	0.150	mg/L	0	75	(0%-30%)			
N-Methyl-N-nitrosomethylamine	0.200	U	ND	0.139	mg/L	4	70	(0%-30%)			
N-Nitrosodi-n-propylamine	0.200	U	ND	0.169	mg/L	0	85	(0%-30%)			
Naphthalene	0.200	U	ND	0.116	mg/L	3	58	(0%-30%)			
Nitrobenzene	0.200	U	ND	0.151	mg/L	4	76	(0%-30%)			
Parachlorometa cresol	0.200	U	ND	0.189	mg/L	6	95	(0%-23%)			
Pentachlorophenol	0.200	U	ND	0.223	mg/L	7	112	(0%-26%)			
Phenanthrene	0.200	U	ND	0.170	mg/L	8	85	(0%-30%)			
Phenol	0.200	U	ND	0.116	mg/L	3	58	(0%-22%)			

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatiles-GC/MS Federal											
Batch 270765											
Pyrene	0.200	U	ND	0.176	mg/L	4	88	(0%-28%)			
bis(2-Chloroethoxy)methane	0.200	U	ND	0.128	mg/L	1	64	(0%-30%)			
bis(2-Chloroethyl) ether	0.200	U	ND	0.129	mg/L	1	65	(0%-27%)			
bis(2-Chloroisopropyl)ether	0.200	U	ND	0.144	mg/L	2	72	(0%-30%)			
bis(2-Ethylhexyl)phthalate	0.200	U	ND	0.222	mg/L	3	111	(0%-27%)			
*2,4,6-Tribromophenol	0.200		0.0796	0.186	mg/L		93	(35%-123%)			
**2-Fluorobiphenyl	0.100		0.0341	0.0729	mg/L		73	(43%-107%)			
***2-Fluorophenol	0.200		0.047	0.124	mg/L		62	(20%-68%)			
**Nitrobenzene-d5	0.100		0.0372	0.0746	mg/L		75	(26%-125%)			
***Phenol-d5	0.200		0.0325	0.105	mg/L		53	(9%-53%)			
***p-Terphenyl-d14	0.100		0.0477	0.0946	mg/L		95	(31%-127%)			
Solids Analysis Federal											
Batch 271052											
QC1200474789 86092001 DUP											
Total Suspended Solids		U	ND	U	ND	mg/L	N/A	(+/-2.50)	SDS	08/16/03	07:20
QC1200474788 LCS											
Total Suspended Solids	500				505	mg/L	101	(95%-105%)			
QC1200474787 MB											
Total Suspended Solids				U	ND	mg/L					
Spectrometric Analysis											
Batch 271225											
QC1200475211 LCS											
COD	500				481	mg/L	96	(85%-115%)	POW1	08/18/03	17:16
QC1200475206 MB											
COD				U	ND	mg/L					
Spectrometric Analysis Federal											
Batch 271225											
QC1200475208 85567007 DUP											
COD			57.0		57.0	mg/L	0 ^	(+/-20.0)	POW1	08/18/03	17:16
QC1200475210 85567007 PS											
COD	500		57.0		541	mg/L	97	(85%-115%)			
Volatile-GC/MS Federal											
Batch 270943											
QC1200474457 LCS											
1,1,1-Trichloroethane	0.020			0.0201	mg/L		100	(72%-136%)	MAP	08/15/03	09:00
1,1,2,2-Tetrachloroethane	0.020			0.0192	mg/L		96	(66%-127%)			
1,1,2-Trichloroethane	0.020			0.0186	mg/L		93	(77%-119%)			
1,1-Dichloroethane	0.020			0.0202	mg/L		101	(80%-119%)			
1,1-Dichloroethylene	0.020			0.0173	mg/L		87	(66%-132%)			
1,2-Dichlorobenzene	0.020			0.0201	mg/L		100	(80%-116%)			
1,2-Dichloroethane	0.020			0.0191	mg/L		96	(67%-131%)			
1,2-Dichloropropane	0.020			0.0196	mg/L		98	(75%-119%)			
1,3-Dichlorobenzene	0.020			0.0207	mg/L		104	(80%-122%)			
1,4-Dichlorobenzene	0.020			0.0204	mg/L		102	(70%-130%)			
2-Chloroethylvinyl ether	0.100			0.087	mg/L		87	(63%-131%)			
Benzene	0.020			0.0191	mg/L		95	(78%-116%)			
Bromodichloromethane	0.020			0.0198	mg/L		99	(78%-127%)			

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Volatile-GC/MS Federal Batch 270943									
Bromoform	0.020		0.0223	mg/L		112	(79%-141%)		
Bromomethane	0.020		0.0196	mg/L		98	(61%-144%)		
Carbon tetrachloride	0.020		0.0209	mg/L		105	(66%-141%)		
Chlorobenzene	0.020		0.0207	mg/L		104	(82%-118%)		
Chloroethane	0.020		0.0218	mg/L		109	(68%-132%)		
Chloroform	0.020		0.0203	mg/L		102	(80%-124%)		
Chloromethane	0.020		0.0183	mg/L		92	(72%-142%)		
Dibromochloromethane	0.020		0.0202	mg/L		101	(81%-129%)		
Ethylbenzene	0.020		0.021	mg/L		105	(80%-120%)		
Methylene chloride	0.020		0.016	mg/L		80	(73%-112%)		
Tetrachloroethylene	0.020		0.0201	mg/L		101	(78%-125%)		
Toluene	0.020		0.0201	mg/L		100	(79%-118%)		
Trichloroethylene	0.020		0.0197	mg/L		99	(83%-122%)		
Vinyl chloride	0.020		0.0207	mg/L		104	(67%-141%)		
cis-1,3-Dichloropropylene	0.020		0.0197	mg/L		99	(77%-129%)		
trans-1,2-Dichloroethylene	0.020		0.0197	mg/L		99	(78%-125%)		
trans-1,3-Dichloropropylene	0.020		0.0205	mg/L		103	(67%-132%)		
**Bromofluorobenzene	0.050		51.2	mg/L		102	(69%-137%)		
**Dibromofluoromethane	0.050		49.7	mg/L		99	(74%-144%)		
**Toluene-d8	0.050		48.8	mg/L		98	(76%-129%)		
QC1200474458 LCS									
Acrolein	0.100		0.128	mg/L		128	(70%-130%)		08/15/03 09:27
Acrylonitrile	0.100		0.0968	mg/L		97	(70%-130%)		
**Bromofluorobenzene	0.050		49.9	mg/L		100	(69%-137%)		
**Dibromofluoromethane	0.050		48.6	mg/L		97	(74%-144%)		
**Toluene-d8	0.050		48.9	mg/L		98	(76%-129%)		
QC1200474454 MB									
1,1,1-Trichloroethane		U	ND	mg/L					08/15/03 10:20
1,1,2,2-Tetrachloroethane		U	ND	mg/L					
1,1,2-Trichloroethane		U	ND	mg/L					
1,1-Dichloroethane		U	ND	mg/L					
1,1-Dichloroethylene		U	ND	mg/L					
1,2-Dichlorobenzene		U	ND	mg/L					
1,2-Dichloroethane		U	ND	mg/L					
1,2-Dichloropropane		U	ND	mg/L					
1,3-Dichlorobenzene		U	ND	mg/L					
1,4-Dichlorobenzene		U	ND	mg/L					
2-Chlorooctylvinyl ether		U	ND	mg/L					
Acrolein		U	ND	mg/L					
Acrylonitrile		U	ND	mg/L					
Benzene		U	ND	mg/L					
Bromodichloromethane		U	ND	mg/L					
Bromoform		U	ND	mg/L					
Bromomethane		U	ND	mg/L					
Carbon tetrachloride		U	ND	mg/L					
Chlorobenzene		U	ND	mg/L					
Chloroethane		U	ND	mg/L					
Chloroform		U	ND	mg/L					

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS Federal Batch 270943											
Chloromethane			U	ND	mg/L						
Dibromochloromethane			U	ND	mg/L						
Ethylbenzene			U	ND	mg/L						
Methylene chloride			U	ND	mg/L						
Tetrachloroethylene			U	ND	mg/L						
Toluene			U	ND	mg/L						
Trichloroethylene			U	ND	mg/L						
Vinyl chloride			U	ND	mg/L						
cis-1,3-Dichloropropylene			U	ND	mg/L						
trans-1,2-Dichloroethylene			U	ND	mg/L						
trans-1,3-Dichloropropylene			U	ND	mg/L						
*Bromofluorobenzene	0.050			50.4	mg/L		101	(69%-137%)			
*Dibromofluoromethane	0.050			50.9	mg/L		102	(74%-144%)			
**Toluene-d8	0.050			48.4	mg/L		97	(76%-129%)			
QC1200474455 86092002 PS											
1,1,1-Trichloroethane	20.0	U	ND	17.3	ug/L		87			08/15/03	19:27
1,1,2,2-Tetrachloroethane	20.0	U	ND	18.6	ug/L		93				
1,1,2-Trichloroethane	20.0	U	ND	19.4	ug/L		97				
1,1-Dichloroethane	20.0	U	ND	18.6	ug/L		93				
1,1-Dichloroethylene	20.0	U	ND	15.0	ug/L		75	(61%-124%)			
1,2-Dichlorobenzene	20.0	U	ND	17.7	ug/L		89				
1,2-Dichloroethane	20.0	U	ND	18.9	ug/L		95				
1,2-Dichloropropane	20.0	U	ND	18.4	ug/L		92				
1,3-Dichlorobenzene	20.0	U	ND	17.8	ug/L		89				
1,4-Dichlorobenzene	20.0	U	ND	17.3	ug/L		86				
2-Chloroethylvinyl ether	100	U	ND	93.5	ug/L		94				
Benzene	20.0	U	ND	17.3	ug/L		87	(71%-116%)			
Bromodichloromethane	20.0	U	ND	18.7	ug/L		94				
Bromoform	20.0	U	ND	22.0	ug/L		110				
Bromomethane	20.0	U	ND	18.5	ug/L		92				
Carbon tetrachloride	20.0	U	ND	18.3	ug/L		91				
Chlorobenzene	20.0	U	ND	18.9	ug/L		94	(77%-114%)			
Chloroethane	20.0	U	ND	20.0	ug/L		100				
Chloroform	20.0	J	0.655	20.1	ug/L		97				
Chloromethane	20.0	U	ND	17.7	ug/L		88				
Dibromochloromethane	20.0	U	ND	20.6	ug/L		103				
Ethylbenzene	20.0	U	ND	18.4	ug/L		92				
Methylene chloride	20.0	U	ND	16.3	ug/L		82				
Tetrachloroethylene	20.0	U	ND	17.3	ug/L		87				
Toluene	20.0	U	ND	17.8	ug/L		89	(73%-116%)			
Trichloroethylene	20.0	U	ND	17.9	ug/L		90	(74%-122%)			
Vinyl chloride	20.0	U	ND	18.5	ug/L		92				
cis-1,3-Dichloropropylene	20.0	U	ND	18.1	ug/L		91				
trans-1,2-Dichloroethylene	20.0	U	ND	17.1	ug/L		86				
trans-1,3-Dichloropropylene	20.0	U	ND	19.3	ug/L		97				
**Bromofluorobenzene	50.0		49.5	48.7	ug/L		98	(69%-137%)			
**Dibromofluoromethane	50.0		50.6	48.2	ug/L		97	(74%-144%)			
**Toluene-d8	50.0		48.1	45.7	ug/L		92	(76%-129%)			

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QC Summary

Workorder: 86092

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS Federal											
Batch 270943											
QC1200474456 86092002 PSD											
1,1,1-Trichloroethane	20.0	U	ND	19.2	ug/L	10	96			08/15/03	19:54
1,1,2,2-Tetrachloroethane	20.0	U	ND	19.6	ug/L	5	98				
1,1,2-Trichloroethane	20.0	U	ND	20.1	ug/L	4	101				
1,1-Dichloroethane	20.0	U	ND	20.5	ug/L	10	102				
1,1-Dichloroethylenc	20.0	U	ND	16.5	ug/L	10	83	(0%-20%)			
1,2-Dichlorobenzene	20.0	U	ND	19.0	ug/L	7	95				
1,2-Dichloroethane	20.0	U	ND	20.9	ug/L	10	104				
1,2-Dichloropropanc	20.0	U	ND	20.6	ug/L	12	103				
1,3-Dichlorobenzene	20.0	U	ND	19.5	ug/L	10	98				
1,4-Dichlorobenzene	20.0	U	ND	19.1	ug/L	10	95				
2-Chloroethylvinyl ether	100	U	ND	113	ug/L	19	113				
Benzene	20.0	U	ND	19.0	ug/L	9	95	(0%-20%)			
Bromodichloromethane	20.0	U	ND	20.6	ug/L	10	103				
Bromoform	20.0	U	ND	24.0	ug/L	9	120				
Bromomethane	20.0	U	ND	20.3	ug/L	9	101				
Carbon tetrachloride	20.0	U	ND	20.0	ug/L	9	100				
Chlorobenzene	20.0	U	ND	20.3	ug/L	7	101	(0%-20%)			
Chloroethane	20.0	U	ND	21.4	ug/L	7	107				
Chloroform	20.0	J	0.655	22.3	ug/L	11	108				
Chloromethane	20.0	U	ND	20.2	ug/L	13	101				
Bromochloromethane	20.0	U	ND	22.1	ug/L	7	110				
Toluene	20.0	U	ND	18.8	ug/L	3	94				
Methylene chloride	20.0	U	ND	18.5	ug/L	12	92				
Tetrachloroethylenc	20.0	U	ND	18.0	ug/L	4	90				
Toluene	20.0	U	ND	19.3	ug/L	8	97	(0%-20%)			
Trichloroethylenc	20.0	U	ND	19.5	ug/L	8	97	(0%-20%)			
Vinyl chloride	20.0	U	ND	19.6	ug/L	6	98				
cis-1,3-Dichloropropylene	20.0	U	ND	19.9	ug/L	9	100				
trans-1,2-Dichloroethylene	20.0	U	ND	18.9	ug/L	10	95				
trans-1,3-Dichloropropylene	20.0	U	ND	19.9	ug/L	3	100				
**Bromofluorobenzene	50.0		49.5	51.5	ug/L		103	(69%-137%)			
**Dibromofluoromethane	50.0		50.6	54.4	ug/L		109	(74%-144%)			
***Toluene-d8	50.0		48.1	48.3	ug/L		97	(76%-129%)			

Notes:

RER is calculated at the 95% confidence level (2-sigma).

The Qualifiers in this report are defined as follows:

- < Result is less than amount reported.
- > Result is greater than amount reported.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.

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QC Summary

Workorder: 86092

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

NPDES Industrial Discharge Monitoring

FORM A

LANL Water Quality and Hydrology (ESH-18)

TSS, COD, metals, Ni (monthly)

(THIS FORM TO ACCOMPANY SAMPLE - THEN RETURN WITH DATA PACKAGE)

Week 2 of 4: Aug. 10 — Aug. 16, 2003

86092%

FWO-WFM Sample Number
NPDES 0803.11

See attached
Rad screening data

COC TRACKING #
N-051A3033

(Use Forms in Numerical Order)

INSTRUCTIONS TO ANALYTICAL LAB:

Week 2 Samples:

EPA Serial No.: EPA 051 TA/Building: TA-50-1 Rm 116

Date Sampled: 8-11-03 Sampled by: TOM MORRISON

Flow: _____ (liters/day) estimated measured

Discharge Description:

color: Clean foam or floating solids: None odor: None

comments: _____

Weekly Samples COD and Metals Samples Refrigerated

Analysis	Results/Concentration	Time Collected	Con-tainer	Preserv. Added	Date Began	Time Began	Method	Analyzed By
TSS		1425	2 @ 1 Liter cubi.	NONE			160.2	
C.O.D.			1 Liter cubi.	H ₂ SO ₄ <input checked="" type="checkbox"/>			410.4	
Cd(T)			1 Liter cubi.	HNO ₃ <input checked="" type="checkbox"/>			200.8	
Pb(T)							200.8	
Cu(T)							200.8	
Zn(T)							200.8	
Hg(T)							245.1	
Cr(T)							200.8	

Monthly (or indicate NOT SAMPLED)

Analysis	Results/Concentration	Time Collected	Con-tainer	Preserv. Added	Date Began	Time Began	Method	Analyzed By
Ni(T)		1425	Use Metals Sample Above	HNO ₃ <input checked="" type="checkbox"/>			200.8	

Chain-of-Custody Record

Relinquished By (Signature) & Org.	Date	Time	Received By (Signature) & Org.
<i>Tom Morrison</i> FWO-RLW	8-13-03	1358	<i>[Signature]</i>
	8-14-03	0915	<i>Mike [Signature]</i>

REVIEWED BY _____ DATE _____ (WQH)

Outfall No. EPA051

Chain-Of-Custody Record

Relinquished By (Signature) & Org.	Date	Time	Received By (Signature) & Org.
<i>James W. Moore</i>	8-13-03	1358	<i>[Signature]</i>
	8-14-03	0915	<i>Mike Hunter</i>

Containers

Quantity	Volume/Type	Preservative	Parameter
4	1 liter amber glass	None	TTO (SVOC)
2	40 ml glass vial	HCl	VOC
2	40 ml glass vial	None	2-Chloroethyl-vinyl ether

WASTE PROFILE FORM

WPF #: 36754

14-Sep-2004 09:24 AM

(Version: 1)

Generator: WORLAND, VINCENT PETER FWO-WFM
WMC: TORREZ, STEVE FWO-SWO
FROM: FWO-SWO

MS : E518
MS : E518
MS : J595/5-4000

WASTE PROFILE (WPF) EXTENSION QUESTIONNAIRE

Our files indicate that your WPF#: 36754 was submitted approximately one year ago. Please review the attached copy and answer the following questions concerning your waste stream to determine whether to renew or void your WPF. Please return the completed questionnaire to FWO-SWO at the address listed below. If your waste stream remains the same, your WPF will be extended for another year. If the original generator is no longer with the generating group or generating this waste, a new WPF will need to be filled out with a new generator. Upon receipt of this questionnaire with a signed Extension Certification, we will send you a return receipt indicating that your WPF is valid for another year. If there are changes in your waste stream, a new WPF will need to be completed.

Are you currently producing the same type of waste as indicated on your WPF#: 36754

YES _____ NO X _____

If yes, please sign the Extension Certification below

If no, will you be producing the same type of waste in the near future?

YES _____ NO X _____

If yes, please sign the Extension Certification below

If no, will you be producing a different type of waste?

YES _____ NO X _____

If no, sign the Void Approval below to indicate that your WPF should be voided

If yes, please submit a new WPF, along with this memo. We will then void your previous WPF and process a new one

Extension Certification

I am producing or will produce the same type of waste as indicated in WPF# 36754

Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Extension-> Signed _____ Date _____

Void Approval

I will no longer be generating or will be producing a different type or composition (a new WPF will be submitted) of waste as indicated in WPF# 36754

Void-> Signed V. Peter Worland Date Oct. 23, 2004

NOTE: PLEASE FOLD AND STAPLE THE FORM TO THE LINE BELOW AND RETURN TO ADDRESS PROVIDED

TO: FWO-SWO

MS: J595

PHONE: 5-4000

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WASTE PROFILE FORM

Section 2 - Characteristics

Ignitability (Check only one.) (°F) (°C)		Corrosivity (Check only one.) (pH)	Reactivity (Check as many as apply.)	Boiling Point (Check only one) (°F) (°C)	
<input type="checkbox"/> < 73	< 22.8	<input type="checkbox"/> ≤ 2.0	<input type="checkbox"/> RCRA Unstable	<input type="checkbox"/> ≤ 95	≤ 35
<input type="checkbox"/> 73 - 99	22.8 - 37.2	<input type="checkbox"/> 2.1 - 4.0	<input type="checkbox"/> Water Reactive	<input type="checkbox"/> > 95	> 35
<input type="checkbox"/> 100 - 139	37.8 - 59.4	<input type="checkbox"/> 4.1 - 6.0	<input type="checkbox"/> Cyanide Bearing (> 250 ppm)		
<input type="checkbox"/> 140 - 200	60.0 - 99.3	<input checked="" type="checkbox"/> 6.1 - 9.0	<input type="checkbox"/> Sulfide Bearing (> 500 ppm)		
<input type="checkbox"/> > 200	> 99.3	<input type="checkbox"/> 9.1 - 12.4	<input type="checkbox"/> Pyrophoric		
<input type="checkbox"/> EPA Ignitable - Non-liquid		<input type="checkbox"/> ≥ 12.5	<input type="checkbox"/> Shock Sensitive		
<input type="checkbox"/> DOT Flammable Gas		<input type="checkbox"/> Liquid corrosive to steel	<input type="checkbox"/> Explosive - DOT Div. _____		
<input type="checkbox"/> DOT Oxidizer		<input type="checkbox"/> Non-aqueous	<input checked="" type="checkbox"/> Non reactive	<input checked="" type="checkbox"/> Not applicable	
<input checked="" type="checkbox"/> Not ignitable					

Identify for all contaminants listed.	Characterization Method			None or Non-detect	Concentration of Contaminants		Above Regulatory Limit		
	AK	TCLP	Total		Present Below Regulatory Limit	Minimum	Maximum	Minimum	Maximum
Toxicity Characteristic Metals									
Arsenic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 5.0 ppm	_____	to	_____	ppm
Barium	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> < 100.0 ppm	_____	to	_____	ppm
Cadmium	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> < 1.0 ppm	_____	to	_____	ppm
Chromium (Total)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> < 5.0 ppm	_____	to	_____	ppm
Lead	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 5.0 ppm	_____	to	_____	ppm
Mercury	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.2 ppm	_____	to	_____	ppm
Selenium	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 1.0 ppm	_____	to	_____	ppm
Silver	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 5.0 ppm	_____	to	_____	ppm
Toxicity Characteristic Organics									
Benzene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____	to	_____	ppm
Carbon tetrachloride	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____	to	_____	ppm
Chlorodane	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.03 ppm	_____	to	_____	ppm
Chlorobenzene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 100.0 ppm	_____	to	_____	ppm
Chloroform	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 6.0 ppm	_____	to	_____	ppm
o - cresol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____	to	_____	ppm
m - cresol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____	to	_____	ppm
p - cresol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____	to	_____	ppm
Cresol - mixed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____	to	_____	ppm
2,4-D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 10.0 ppm	_____	to	_____	ppm
1,4-Dichlorobenzene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 7.5 ppm	_____	to	_____	ppm
1,2-Dichloroethane	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____	to	_____	ppm
1,1-Dichloroethylene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.7 ppm	_____	to	_____	ppm
2,4-Dinitrotoluene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.13 ppm	_____	to	_____	ppm
Endrin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.02 ppm	_____	to	_____	ppm
Heptachlor (& its epoxide)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.008 ppm	_____	to	_____	ppm
Hexchlorobenzene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.13 ppm	_____	to	_____	ppm
Hexchlorobutadiene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____	to	_____	ppm
Hexchloroethane	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 3.0 ppm	_____	to	_____	ppm
Lindane	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.4 ppm	_____	to	_____	ppm
Methoxychlor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 10.0 ppm	_____	to	_____	ppm
Methyl ethyl ketone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____	to	_____	ppm
Nitrobenzene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 2.0 ppm	_____	to	_____	ppm
Pentachlorophenol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 100.0 ppm	_____	to	_____	ppm
Pyridine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 ppm	_____	to	_____	ppm
Tetrachloroethylene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.7 ppm	_____	to	_____	ppm
Toxaphene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____	to	_____	ppm
Trichloroethylene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____	to	_____	ppm
2,4,5-Trichlorophenol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 400.0 ppm	_____	to	_____	ppm
2,4,6-Trichlorophenol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 2.0 ppm	_____	to	_____	ppm
2,4,5-TP (Silvex)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 1.0 ppm	_____	to	_____	ppm
Vinyl chloride	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.2 ppm	_____	to	_____	ppm

Attachment 1 - Wastewater Characteristics for SWSC (TA-46)						
For help in completing this section, call ESH-18 at 7-4882. Identify presence of any constituents listed below. Use of Acceptable Knowledge in lieu of analytical data must be pre-approved by ESH-18.						
Microtox Analysis #: _____ NOTE: Microtox analysis must be performed. Contact JCI/ENV to schedule analysis.						
Are there any detectable levels of gross Alpha, gross Beta, gross Gamma, and/or Tritium? <input type="checkbox"/> No <input type="checkbox"/> Yes						
All methods of analysis must conform to those approved pursuant to 40 CFR 136 unless an alternative method has been approved by ESH-18. All metal concentrations are for the dissolved fraction present in the sample unless otherwise indicated.						
Flow Rate Parameters	<input type="checkbox"/> Flow Rate of 100 gallons/day or less			<input type="checkbox"/> Flow Rate of greater than 100 gallons/day		
	None/ Non-detect	Within Regulatory Limits	Above Limit	None/ Non-detect	Within Regulatory Limits	Above Limit
pH		<input type="checkbox"/> 5 - 11 SU	<input type="checkbox"/>		<input type="checkbox"/> 5 - 11 SU	<input type="checkbox"/>
Chemical Oxygen Demand (COD)		<input type="checkbox"/> ≤ 750 mg/l	<input type="checkbox"/>		<input type="checkbox"/> ≤ 500 mg/l	<input type="checkbox"/>
Microtox results (a)		<input type="checkbox"/> < 55% screen	<input type="checkbox"/>		<input type="checkbox"/> < 50% screen	<input type="checkbox"/>
(b)		<input type="checkbox"/> > 20% EC50	<input type="checkbox"/>		<input type="checkbox"/> > 25% EC50	<input type="checkbox"/>
Temperature		<input type="checkbox"/> ≤ 180 °F	<input type="checkbox"/>		<input type="checkbox"/> ≤ 140 °F	<input type="checkbox"/>
Cyanide (Total)	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 1.0 mg/l	<input type="checkbox"/>
Fluoride	<input type="checkbox"/>	<input type="checkbox"/> < 200.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 50.0 mg/l	<input type="checkbox"/>
Iron	<input type="checkbox"/>	<input type="checkbox"/> < 100.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 35.0 mg/l	<input type="checkbox"/>
Magnesium	<input type="checkbox"/>	<input type="checkbox"/> < 100.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 50.0 mg/l	<input type="checkbox"/>
Manganese	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 1.0 mg/l	<input type="checkbox"/>
Metals (Total)	<input type="checkbox"/>	<input type="checkbox"/> < 40.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 10.0 mg/l	<input type="checkbox"/>
Nickel	<input type="checkbox"/>	<input type="checkbox"/> < 50.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ≤ 3.0 mg/l	<input type="checkbox"/>
Nitrogen (Total)	<input type="checkbox"/>	<input type="checkbox"/> ≤ 100.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ≤ 50.0 mg/l	<input type="checkbox"/>
Oil and Greases	<input type="checkbox"/>	<input type="checkbox"/> < 100.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 50.0 mg/l	<input type="checkbox"/>
Phosphorus (Total)	<input type="checkbox"/>	<input type="checkbox"/> < 100.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 50.0 mg/l	<input type="checkbox"/>
Silver	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 mg/l	<input type="checkbox"/>
Total Suspended Solids (TSS)	<input type="checkbox"/>	<input type="checkbox"/> ≤ 400.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ≤ 300.0 mg/l	<input type="checkbox"/>
Zinc	<input type="checkbox"/>	<input type="checkbox"/> < 25.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 mg/l	<input type="checkbox"/>

Wastewater contaminants Identify for all constituents listed	None/Non-detect	Present within Regulatory Limits	Above Limit
Dissolved Aluminum	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 mg/l	<input type="checkbox"/>
Dissolved Arsenic	<input type="checkbox"/>	<input type="checkbox"/> < 0.2 mg/l	<input type="checkbox"/>
Barium	<input type="checkbox"/>	<input type="checkbox"/> < 100.0 mg/l	<input type="checkbox"/>
Beryllium	<input type="checkbox"/>	<input type="checkbox"/> < 5.3 mg/l	<input type="checkbox"/>
Dissolved Boron	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 mg/l	<input type="checkbox"/>
Dissolved Cadmium	<input type="checkbox"/>	<input type="checkbox"/> < 0.05 mg/l	<input type="checkbox"/>
Chlorine (Total Residual)	<input type="checkbox"/>	<input type="checkbox"/> < 3.0 mg/l	<input type="checkbox"/>
Dissolved Chromium	<input type="checkbox"/>	<input type="checkbox"/> < 1.0 mg/l	<input type="checkbox"/>
Dissolved Cobalt	<input type="checkbox"/>	<input type="checkbox"/> < 1.0 mg/l	<input type="checkbox"/>
Dissolved Copper	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 mg/l	<input type="checkbox"/>
Dissolved Lead	<input type="checkbox"/>	<input type="checkbox"/> < 0.1 mg/l	<input type="checkbox"/>
Total Mercury	<input type="checkbox"/>	<input type="checkbox"/> < 0.01 mg/l	<input type="checkbox"/>
Molybdenum	<input type="checkbox"/>	<input type="checkbox"/> < 75.0 mg/l	<input type="checkbox"/>
Polychlorinated Biphenyls (PCB)	<input type="checkbox"/>	None Detected	<input type="checkbox"/>
Dissolved Selenium	<input type="checkbox"/>	<input type="checkbox"/> < 0.05 mg/l	<input type="checkbox"/>
Dissolved Vanadium	<input type="checkbox"/>	<input type="checkbox"/> < 0.1 mg/l	<input type="checkbox"/>
Dissolved Zinc	<input type="checkbox"/>	<input type="checkbox"/> < 25.0 mg/l	<input type="checkbox"/>

Attachment 2 - Wastewater Characteristics for RLWTF (TA-50 & TA-21) TA-53					
For help in completing this section, call 7-4301.					
Indicate if waste was: <input type="checkbox"/> Accelerator produced <input type="checkbox"/> Reactor produced <input type="checkbox"/> Other (Describe in WPF Section 1 "Waste/Process Description.")					
Radionuclide Contaminants					
Identify for the following:	Present At Or Below LOC (in Ci/l)	Range if above LOC in Ci/l Min. / Max.	Identify for the following:	Present At Or Below LOC (in Ci/l)	Range if above LOC in Ci/l Min. / Max.
As-74	<input type="checkbox"/> ≤ 4.0 E-8	_____ / _____	Rb-84	<input type="checkbox"/> ≤ 1.0 E-8	_____ / _____
Be-7	<input type="checkbox"/> ≤ 1.0 E-6	_____ / _____	Sc-46	<input type="checkbox"/> ≤ 2.0 E-8	_____ / _____
Ce-141	<input type="checkbox"/> ≤ 5.0 E-8	_____ / _____	Sc-48	<input type="checkbox"/> ≤ 2.0 E-8	_____ / _____
Cs-134	<input type="checkbox"/> ≤ 2.0 E-9	_____ / _____	Se-75	<input type="checkbox"/> ≤ 2.0 E-8	_____ / _____
Cs-137	<input type="checkbox"/> ≤ 3.0 E-9	_____ / _____	Na-22	<input type="checkbox"/> ≤ 1.0 E-8	_____ / _____
Co-56	<input type="checkbox"/> ≤ 1.0 E-8	_____ / _____	Sr-85	<input type="checkbox"/> ≤ 7.0 E-8	_____ / _____
Co-57	<input type="checkbox"/> ≤ 1.0 E-7	_____ / _____	Sr-89	<input type="checkbox"/> ≤ 2.0 E-8	_____ / _____
Co-58	<input type="checkbox"/> ≤ 4.0 E-8	_____ / _____	Sr-90	<input type="checkbox"/> ≤ 1.0 E-9	_____ / _____
Co-60	<input type="checkbox"/> ≤ 5.0 E-9	_____ / _____	Sn-113	<input type="checkbox"/> ≤ 5.0 E-8	_____ / _____
Eu-152	<input type="checkbox"/> ≤ 2.0 E-8	_____ / _____	V-48	<input type="checkbox"/> ≤ 2.0 E-8	_____ / _____
H-3	<input checked="" type="checkbox"/> ≤ 2.0 E-8	2.0 mcifl / 2.7 mcifl	Y-88	<input type="checkbox"/> ≤ 3.0 E-8	_____ / _____
I-133	<input type="checkbox"/> ≤ 1.0 E-8	_____ / _____	Zn-65	<input type="checkbox"/> ≤ 9.0 E-9	_____ / _____
Mn-52	<input type="checkbox"/> ≤ 2.0 E-8	_____ / _____	Am-241	<input type="checkbox"/> ≤ 0.1 E-6	_____ / _____
Mn-54	<input type="checkbox"/> ≤ 5.0 E-8	_____ / _____	Pu-238	<input type="checkbox"/> ≤ 0.1 E-6	_____ / _____
Ra-226 + 228	<input type="checkbox"/> ≤ 3.0 E-11	_____ / _____	Pu-239	<input type="checkbox"/> ≤ 0.1 E-6	_____ / _____
Rb-83	<input type="checkbox"/> ≤ 2.0 E-8	_____ / _____	U-234	<input type="checkbox"/> ≤ 5.0 E-8	_____ / _____
Others:			Others:		
_____			_____		
_____			_____		
_____			_____		
Other Contaminants					
Metal Contaminants	Present Below LOC (in ppm)	Range if above LOC (in ppm) Min. / Max.	Additional Contaminants	Min. / Max.	mg/l
Aluminum	<input type="checkbox"/> ≤ 5.0	_____ to _____ ppm	Chemical Oxygen Demand (COD)	_____	_____ mg/l
Boron	<input type="checkbox"/> ≤ 5.0	_____ to _____ ppm	Total Suspended Solids (TSS)	_____	_____ mg/l
Cobalt	<input type="checkbox"/> ≤ 1.0	_____ to _____ ppm	<input type="checkbox"/> Total Nitrogen or (only one entry needed)	_____	_____ mg/l
Copper	<input type="checkbox"/> ≤ 1.0	_____ to _____ ppm	<input type="checkbox"/> Total Nitrates	_____	_____ mg/l
Vanadium	<input type="checkbox"/> ≤ 0.10	_____ to _____ ppm			
Zinc	<input type="checkbox"/> ≤ 95.40	_____ to _____ ppm			
Radioactive Contaminant Totals:			For TA-55 use only.		
Total Alpha <u>300.720 ± 30 p</u> Ci/l Total Beta <u>0.87 m</u> Ci/l Total Gamma _____ Ci/l			Wastewater will be discharged through one of the following: <input type="checkbox"/> Acid Line <input type="checkbox"/> Caustic Line <input type="checkbox"/> Industrial Waste Line		
<input type="checkbox"/> Yes <input type="checkbox"/> No	Scintillation Cocktail	Brand Name _____	Volume _____	Unit _____	
<input type="checkbox"/> Yes <input type="checkbox"/> No	Chemical Treatment for Boilers / Water Chillers				
<input type="checkbox"/> Yes <input type="checkbox"/> No	Industrial Cleaner	Type _____	Volume _____	Unit _____	
Average daily volume when discharge occurs:			<u>8000</u>	<input checked="" type="checkbox"/> Gallons/day <input type="checkbox"/> Liters/day	
Maximum daily volume when discharge occurs:			<u>2000</u>	<input checked="" type="checkbox"/> Gallons/day <input type="checkbox"/> Liters/day	
Estimated number of days per year discharge will occur:			<u>one</u>		
Estimated total volume per year discharged to the Radioactive Liquid Waste Collection System at TA-50 / TA-21:			<u>8000</u>	<input checked="" type="checkbox"/> Gallons <input type="checkbox"/> Liters	

Attachment 3 – Wastewater Characteristics for the TA-53 RLWTP

For help in completing this section, call 667-4301.

Total Activity Range (in Ci/l):

Min. / Max. Ci/l / Ci/l

Radionuclide Contaminants:

Identify for the following:	Present at or below Concentration Limit (in Ci/l)	≥ 1% of Total Activity Yes/No	Range if ≥ 1% of Total Activity or above Concentration Limit (in Ci/l) (and a half-life of ≥ 30 Days) Min. / Max.	Identify for the following:	Present at or below Concentration Limit (in Ci/l)	≥ 1% of Total Activity Yes/No	Range if ≥ 1% of Total Activity or above Concentration Limit (in Ci/l) (and a half-life of ≥ 30 Days) Min. / Max.
Be-7	<input type="checkbox"/> ≤ 9.0 E-4	<input type="checkbox"/> Yes	_____ / _____	Ta-174	<input type="checkbox"/> ≤ 3.1 E-4	<input type="checkbox"/> Yes	_____ / _____
Co-56	<input type="checkbox"/> ≤ 8.8 E-6	<input type="checkbox"/> Yes	_____ / _____	Ta-175	<input type="checkbox"/> ≤ 3.6 E-4	<input type="checkbox"/> Yes	_____ / _____
Co-57	<input type="checkbox"/> ≤ 2.0 E-5	<input type="checkbox"/> Yes	_____ / _____	Ta-176	<input type="checkbox"/> ≤ 4.5 E-4	<input type="checkbox"/> Yes	_____ / _____
Co-58	<input type="checkbox"/> ≤ 3.5 E-5	<input type="checkbox"/> Yes	_____ / _____	Ta-177	<input type="checkbox"/> ≤ 4.7 E-4	<input type="checkbox"/> Yes	_____ / _____
Co-60	<input type="checkbox"/> ≤ 5.7 E-6	<input type="checkbox"/> Yes	_____ / _____	Ta-179	<input type="checkbox"/> ≤ 2.8 E-4	<input type="checkbox"/> Yes	_____ / _____
Gd-148	<input type="checkbox"/> ≤ 3.9 E-7	<input type="checkbox"/> Yes	_____ / _____	Ta-182	<input type="checkbox"/> ≤ 1.5 E-4	<input type="checkbox"/> Yes	_____ / _____
H-3	<input checked="" type="checkbox"/> ≤ 3.5 E-3	<input type="checkbox"/> Yes	_____ / _____	Tm-166	<input type="checkbox"/> ≤ 2.0 E-4	<input type="checkbox"/> Yes	_____ / _____
Hf-172	<input type="checkbox"/> ≤ 9.1 E-5	<input type="checkbox"/> Yes	_____ / _____	W-176	<input type="checkbox"/> ≤ 2.9 E-4	<input type="checkbox"/> Yes	_____ / _____
Hf-173	<input type="checkbox"/> ≤ 3.3 E-4	<input type="checkbox"/> Yes	_____ / _____	W-177	<input type="checkbox"/> ≤ 3.3 E-4	<input type="checkbox"/> Yes	_____ / _____
Hf-175	<input type="checkbox"/> ≤ 4.1 E-4	<input type="checkbox"/> Yes	_____ / _____	W-178	<input type="checkbox"/> ≤ 5.6 E-4	<input type="checkbox"/> Yes	_____ / _____
I-125	<input type="checkbox"/> ≤ 5.7 E-7	<input type="checkbox"/> Yes	_____ / _____	W-181	<input type="checkbox"/> ≤ 1.6 E-3	<input type="checkbox"/> Yes	_____ / _____
I-126	<input type="checkbox"/> ≤ 1.1 E-7	<input type="checkbox"/> Yes	_____ / _____	W-185	<input type="checkbox"/> ≤ 4.4 E-3	<input type="checkbox"/> Yes	_____ / _____
Lu-170	<input type="checkbox"/> ≤ 2.6 E-4	<input type="checkbox"/> Yes	_____ / _____	W-187	<input type="checkbox"/> ≤ 9.0 E-3	<input type="checkbox"/> Yes	_____ / _____
Lu-171	<input type="checkbox"/> ≤ 3.0 E-4	<input type="checkbox"/> Yes	_____ / _____	Y-88	<input type="checkbox"/> ≤ 2.4 E-7	<input type="checkbox"/> Yes	_____ / _____
Lu-172	<input type="checkbox"/> ≤ 1.2 E-4	<input type="checkbox"/> Yes	_____ / _____	Yb-166	<input type="checkbox"/> ≤ 1.9 E-4	<input type="checkbox"/> Yes	_____ / _____
Mn-54	<input type="checkbox"/> ≤ 4.2 E-5	<input type="checkbox"/> Yes	_____ / _____	Yb-169	<input type="checkbox"/> ≤ 2.7 E-4	<input type="checkbox"/> Yes	_____ / _____
Na-22	<input type="checkbox"/> ≤ 1.2 E-5	<input type="checkbox"/> Yes	_____ / _____	Zn-65	<input type="checkbox"/> ≤ 1.5 E-6	<input type="checkbox"/> Yes	_____ / _____
Rb-83	<input type="checkbox"/> ≤ 1.3 E-6	<input type="checkbox"/> Yes	_____ / _____	Others:			
Rb-84	<input type="checkbox"/> ≤ 1.0 E-6	<input type="checkbox"/> Yes	_____ / _____	_____	<input type="checkbox"/> Yes	_____ / _____	
Sc-46	<input type="checkbox"/> ≤ 6.0 E-6	<input type="checkbox"/> Yes	_____ / _____	_____	<input type="checkbox"/> Yes	_____ / _____	
Se-75	<input type="checkbox"/> ≤ 3.4 E-7	<input type="checkbox"/> Yes	_____ / _____	_____	<input type="checkbox"/> Yes	_____ / _____	
Sr-85	<input type="checkbox"/> ≤ 6.0 E-8	<input type="checkbox"/> Yes	_____ / _____	_____	<input type="checkbox"/> Yes	_____ / _____	
Ta-173	<input type="checkbox"/> ≤ 2.7 E-4	<input type="checkbox"/> Yes	_____ / _____	_____	<input type="checkbox"/> Yes	_____ / _____	

Identify for the following:	Present Yes/No	≥ 1% of Total Activity Yes/No	Provide Range in Ci/l Min. / Max.	Identify	Present at or below Concentration Limit (in Ci/l)	≥ 1% of Total Activity Yes/No	Provide Range in Ci/l Min. / Max.
Am-241	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	_____ / _____	Total TRU	<input type="checkbox"/> ≤ 1.0 E-8	<input type="checkbox"/> Yes	_____ / _____
Pu-238	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	_____ / _____	Other Contaminates			
Pu-239	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	_____ / _____	Additional Contaminants:		Present at Or Below Concentration Level (in mg/l)	
U-234	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	_____ / _____	Total Dissolved Solids (TDS)		<input type="checkbox"/> ≤ 1000	
U-235	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	_____ / _____	Total Suspended Solids (TSS)		<input type="checkbox"/> ≤ 100	
Others:				Oils/Grease		<input type="checkbox"/> ≤ 10	
_____	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	_____ / _____	Surfactants/Detergents		<input type="checkbox"/> ≤ 10	
_____	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	_____ / _____				

Radioactive Contaminant Totals:

Discharge Location:	Present At Or Below Activity Level (in Ci/l)
Collection System	<input type="checkbox"/> ≤ 3.2 E-2
Tanker Truck	<input type="checkbox"/> ≤ 2.0 E-6 *
Tuff Tank	<input type="checkbox"/> ≤ 3.2 E-2
55 Gallon Drum	<input type="checkbox"/> ≤ 3.2 E-2
Other _____	<input type="checkbox"/> ≤ 3.2 E-2

* or qualify as "limited quantity" per 40 CFR § 173.425

Temperature:

Discharge Temperature 120 °F °F °C

<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Surfactant/Detergent	Brand Name	Volume	Unit
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Industrial Cleaner	Type	Volume	Unit
Average daily volume when discharge occurs:		<u>6000</u>	<input checked="" type="checkbox"/> Gallons/day <input type="checkbox"/> Liters/day	
Maximum daily volume when discharge occurs:		<u>2000</u>	<input checked="" type="checkbox"/> Gallons/day <input type="checkbox"/> Liters/day	
Estimated number of days per year discharge will occur:		<u>1</u>		
Estimated total volume per year discharged to the Radioactive Liquid Waste Collection System at TA-53:		<u>6000</u>	<input checked="" type="checkbox"/> Gallons/day <input type="checkbox"/> Liters/day	

LABORATORY ANALYSES

SAMPLE SUBMITTED BY:		P. Warland			DATE:		
ORIGIN OF SAMPLE(S)		WMU Dist 2/22 # NE 2/22					
DATE SAMPLED	DATE BEGUN	METHOD	ANALYZED BY	DESCRIPTION	DATE BEGUN	METHOD	ANALYZED BY
Test/Analysis	Result/Conc			Test/Analysis	Result/Conc		
WMU Dist 2/22	^{mp} 2.			NE 2/22			
Gross α	0 ± 30 pCi/l			³ H	2.0 ± 1.2 μCi/l		
Gross β	8.9 ± 9 nCi/l						
3H	2.7 ± 3 μCi/l						
REMARKS:							

H7-LAB-35A

APPROVED: HCZ
Chief Chemist

DATE: 2/23/11
Lab Copy

PARAMETER	TYPE OF ANALYSIS (i.e.: "Total Content" or "TCLP" of liquid sample)	Units (unless column heading has units in title)	EVB (Entered by User)	EVB (kg)	EVB (pounds)	TK8 DATA
Waste Quantity in Tanker Load	n/a	Gallons	72	278.4	613.7	28
Specific Gravity	n/a	no units	1.02	n/a	n/a	1.08
TDS	Total	mg/l	34,000	9	20	166,000
TSS	Total	mg/l	2,102	1	1	224
Conductivity	n/a	microS/cm	40 mS/cm	n/a	n/a	122
pH	n/a	no units	6.70	n/a	n/a	8.90
Ag	Total	mg/l	0.116	0.000	0.000	0.016
Al	Total	mg/l	0.40	0.000	0.000	0.56
Ammonia Nitrogen (NH ₃ -N)	Total	mg/l	34.00	0.009	0.020	2.60
As	Total	mg/l	0.044	0.000	0.000	0
Ba	Total	mg/l	0.184	0.000	0.000	0.28
Be	Total	mg/l	0.00500	0.000	0.000	0
Ca	Total	mg/l	1,900	0.519	1.143	1,340
Cd	Total	mg/l	0.035	0.000	0.000	0.022
Cl	Total	mg/l	9,396.000	2.564	24792.000	24,792.000
Co	Total	mg/l	0.069	0.000	0.017	0.017
COD	Total	mg/l	620	0.169	1270.000	1,270.000
CN Ammenable to Chlorination***	Total	mg/l	0.000	0.000	0.000	0.000
CN, Total***	Total	mg/l	0.000	0.000	0.000	0.000
Cr	Total	mg/l	1.180	0.000	0.133	0.133
Cu	Total	mg/l	2.08	0.001	0.465	0.465
EDTA	Total	mg/l		0.000	0.000	0.000
F	Total	mg/l	16.000	0.004	70.000	70.000
Fe	Total	mg/l	90.3	0.025	0.240	0.240
Hg	Total	mg/l	0.004510	0.000	0.000	0.009
K	Total	mg/l	1,106	0.302	20270.000	20,270.000
Mg	Total	mg/l	333	0.091	343.000	343.000
Mn	Total	mg/l	1.620	0.000	0.131	0.131
Na	Total	mg/l	11,400	3.111	6.859	37,800.000
Ni	Total	mg/l	4.8	0.001	0.003	0.664
NO ₃ -N	Total	mg/l	1,540.000	0.420	0.927	22,600.000
NO ₃ -N converted to NO ₂	Total	mg/l	1,530.000	0.418	0.920	22,600.000

Pb	Total	mg/l	0.063	0.000	0.000	0.000
PO ₄	Total	mg/l	0.000	0.000	0.000	0.000
Sb	Total	mg/l	0.031	0.000	0.000	0.000
Se	Total	mg/l	0.020	0.000	0.000	0.000
SiO ₂ , Reactive	Total		61.000	0.017	0.037	17.000
SiO ₂ , Total	Total	mg/l	131	0.036	0.079	36.000
SO ₄	Total	mg/l	5,024.000	1.371	3.023	2,333.000
TOC	Total	mg/l	68	0.019	0.041	75.000
Tl (Thallium)	Total	mg/l	0.010	0.000	0.000	0.000
V	Total	mg/l	0.21	0.000	0.000	0.000
Zn	Total	mg/l	13.4	0.004	0.008	0.700
Vinyl Chloride	Total	mg/l	0.02	0.000	0.000	0.020
1,1-Dichloroethene	Total	mg/l	0.07	0.000	0.000	0.070
2-Butanone	Total	mg/l	0.01	0.000	0.000	0.509
Chloroform	Total	mg/l	0.002	0.000	0.000	0.002
Carbon Tetrachloride	Total	mg/l	0.002	0.000	0.000	0.002
1,2-Dichloroethane	Total	mg/l	0.002	0.000	0.000	0.002
Benzene	Total	mg/l	0.002	0.000	0.000	0.002
Trichloroethene	Total	mg/l	0.002	0.000	0.000	0.002
Tetrachloroethene	Total	mg/l	0.002	0.000	0.000	0.002
Chlorobenzene	Total	mg/l	0.002	0.000	0.000	0.002
Pyridine	Total	mg/l	0.5	0.000	0.000	0.500
1,4-Dichlorobenzene	Total	mg/l	0.75	0.000	0.000	0.750
2-Methylphenol	Total	mg/l	20	0.005	0.012	0.000
3,4-Methylphenol	Total	mg/l	20	0.005	0.012	0.000
Hexachloroethane	Total	mg/l	0.3	0.000	0.000	0.300
Nitrobenzene	Total	mg/l	0.2	0.000	0.000	0.200
Hexachlorobutadiene	Total	mg/l	0.002	0.000	0.000	0.002
2,4,6-Trichlorophenol	Total	mg/l	0.2	0.000	0.000	0.200
2,4,5-Trichlorophenol	Total	mg/l	40	0.011	0.024	40.000
2,4-Dinitrotoluene	Total	mg/l	0.13	0.000	0.000	0.130
Hexachlorobenzene	Total	mg/l	0.13	0.000	0.000	0.130
Pentachlorophenol	Total	mg/l	10	0.003	0.006	10.000
Lindane	Total	mg/l	0.04	0.000	0.000	0.040
Heptachlor	Total	mg/l	0.008	0.000	0.000	0.008

Endrin	Total	mg/l	0.002	0.000	0.000	0.002
Methoxychlor	Total	mg/l	1	0.000	0.001	1.000
Toxaphene	Total	mg/l	0.05	0.000	0.000	0.050
Chlordane	Total	mg/l	0.003	0.000	0.000	0.003
2,4-D	Total	mg/l	1	0.000	0.001	1.000
Silvex	Total	mg/l	0	0.000	0.000	0.000

EDTA (Amount added to 10,000 gallons of feed TO the evaporator)	n/a	mg/l	n/a	n/a	n/a	n/a
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Load Number Counter	1
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PARAMETER	TOTAL Ci/TANKER LOAD (i.e.: per "Cell J10 gallons")	TOTAL Ci/gm (i.e.: per "Cell J7 pounds")	EVB SPECIFIC ACTIVITY (picoCi/ml)		TK8 SPECIFIC ACTIVITY (picoCi/ml)
Gross Alpha	4.37E-05	1.11E-10	7.10E+01		2.30E+02
Gross Beta	1.85E-06	4.72E-12	3.50E+00		8.50E+00
Gross Gamma	6.80E-06	1.73E-11	2.20E+01		7.50E+00
H3	1.09E-04	2.77E-10	1.31E+02		6.90E+02
Am241	1.12E-05	2.87E-11	2.38E+01		4.50E+01
Co57	1.64E-06	4.17E-12	6.00E+00		0.00E+00
Cs137	8.59E-07	2.19E-12	1.60E+00		4.00E+00
Fe55	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Na22	6.68E-07	1.70E-12	2.10E+00		9.00E-01
Ni-63	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Np237	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Pu238	4.72E-06	1.20E-11	1.69E+01		9.92E-01

Pu239	5.89E-06	1.50E-11	2.14E+01		5.11E-01
Rb83	4.37E-07	1.11E-12	1.60E+00		0.00E+00
Rb84	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Se75	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Sr85	1.09E-06	2.78E-12	4.00E+00		0.00E+00
Sr89	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Sr90	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Th228	1.67E-09	4.26E-15	6.13E-03		0.00E+00
Th230	7.20E-10	1.84E-15	2.64E-03		0.00E+00
Th232	3.82E-10	9.74E-16	1.40E-03		0.00E+00
U234	4.12E-07	1.05E-12	1.51E+00		0.00E+00
U235	2.71E-08	6.91E-14	9.93E-02		0.00E+00
U238	7.23E-07	1.84E-12	2.65E+00		0.00E+00
Y88	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Am241 (Gamma Spec)	8.73E-06	2.23E-11	3.20E+01		0.00E+00
					0.00E+00

WASTE PROFILE FORM

WPF #: 33739

01-May-2002 01:22 PM

(Version: 1)

Generator: MOSS, WILLIAM DAVID FWO-WEM
WMC: TORREZ, STEVE FWO-WEM
FROM: FWO-SWO

MS: E518
MS: E518
MS: J595/5-4000

WASTE PROFILE (WPF) EXTENSION QUESTIONNAIRE

Our files indicate that your WPF#: 33739 was submitted approximately one year ago. Please review the attached copy and answer the following questions concerning your waste stream to determine whether to renew or void your WPF. Please return the completed questionnaire to FWO-SWO at the address listed below. If your waste stream remains the same, your WPF will be extended for another year. If the original generator is no longer with the generating group or generating this waste, a new WPF will need to be filled out with a new generator. Upon receipt of this questionnaire with a signed Extension Certification, we will send you a return receipt indicating that your WPF is valid for another year. If there are changes in your waste stream, a new WPF will need to be completed.

Are you currently producing the same type of waste as indicated on your WPF#: 33739

YES NO

If yes, please sign the Extension Certification below

If no, will you be producing the same type of waste in the near future?

YES NO

If yes, please sign the Extension Certification below

If no, will you be producing a different type of waste?

YES NO

If no, sign the Void Approval below to indicate that your WPF should be voided

If yes, please submit a new WPF, along with this memo. We will then void your previous WPF and process a new one

Extension Certification

I am producing or will produce the same type of waste as indicated in WPF# 33739

Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Extension-> Signed Wm D. Moran Date 05/09/02

Void Approval

I will no longer be generating or will be producing a different type or composition (a new WPF will be submitted) of waste as indicated in WPF# 33739

Void-> Signed _____ Date _____

NOTE: PLEASE FOLD AND STAPLE THE FORM TO THE LINE BELOW AND RETURN TO ADDRESS PROVIDED

TO: FWO-SWO

MS: J595

PHONE: 5-4000

WASTE PROFILE FORM

WPF #: 33739

05-May-2003 10:00 AM

(Version: 2)

Generator: MOSS, WILLIAM DAVID FWO-WFM
WMC: TORREZ, STEVE FWO-SWO
FROM: FWO-SWO

MS : E518
MS : E518
MS : J595/5-4000

WASTE PROFILE (WPF) EXTENSION QUESTIONNAIRE

Our files indicate that your WPF#: 33739 was submitted approximately one year ago. Please review the attached copy and answer the following questions concerning your waste stream to determine whether to renew or void your WPF. Please return the completed questionnaire to FWO-SWO at the address listed below. If your waste stream remains the same, your WPF will be extended for another year. If the original generator is no longer with the generating group or generating this waste, a new WPF will need to be filled out with a new generator. Upon receipt of this questionnaire with a signed Extension Certification, we will send you a return receipt indicating that your WPF is valid for another year. If there are changes in your waste stream, a new WPF will need to be completed.

Are you currently producing the same type of waste as indicated on your WPF#: 33739

YES NO

If yes, please sign the Extension Certification below

If no, will you be producing the same type of waste in the near future?

YES NO

If yes, please sign the Extension Certification below

If no, will you be producing a different type of waste?

YES NO

If no, sign the Void Approval below to indicate that your WPF should be voided

If yes, please submit a new WPF, along with this memo. We will then void your previous WPF and process a new one

Extension Certification

I am producing or will produce the same type of waste as indicated in WPF# 33739

Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Extension->

Signed

William D. Moss

Date

05/08/03

Void Approval

I will no longer be generating or will be producing a different type or composition (a new WPF will be submitted) of waste as indicated in WPF# 33739

Void->

Signed _____

Date _____

NOTE: PLEASE FOLD AND STAPLE THE FORM TO THE LINE BELOW AND RETURN TO ADDRESS PROVIDED

TO: FWO-SWO

MS: J595

PHONE: 5-4000

WASTE PROFILE FORM

WPF #: 33739

13-Apr-2004 02:06 PM

(Version: 3)

Generator: MOSS, WILLIAM DAVID FWO-WFM
WMC: TORREZ, STEVE FWO-SWO
FROM: FWO-SWO

MS : E518
MS : E518
MS : J595/5-4000

WASTE PROFILE (WPF) EXTENSION QUESTIONNAIRE

Our files indicate that your WPF#: 33739 was submitted approximately one year ago. Please review the attached copy and answer the following questions concerning your waste stream to determine whether to renew or void your WPF. Please return the completed questionnaire to FWO-SWO at the address listed below. If your waste stream remains the same, your WPF will be extended for another year. If the original generator is no longer with the generating group or generating this waste, a new WPF will need to be filled out with a new generator. Upon receipt of this questionnaire with a signed Extension Certification, we will send you a return receipt indicating that your WPF is valid for another year. If there are changes in your waste stream, a new WPF will need to be completed.

Are you currently producing the same type of waste as indicated on your WPF#: 33739

YES NO

If yes, please sign the Extension Certification below

If no, will you be producing the same type of waste in the near future?

YES NO

If yes, please sign the Extension Certification below

If no, will you be producing a different type of waste?

YES NO

If no, sign the Void Approval below to indicate that your WPF should be voided

If yes, please submit a new WPF, along with this memo. We will then void your previous WPF and process a new one

Extension Certification

I am producing or will produce the same type of waste as indicated in WPF# 33739

Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Extension->

Signed

William David Moss

Date

04/20/04

Void Approval

I will no longer be generating or will be producing a different type or composition (a new WPF will be submitted) of waste as indicated in WPF# 33739

Void->

Signed _____

Date _____

NOTE: PLEASE FOLD AND STAPLE THE FORM TO THE LINE BELOW AND RETURN TO ADDRESS PROVIDED

TO: FWO-SWO

MS: J595

PHONE: 5-4000

✓

WASTE PROFILE FORM

WPF #: 33739

(Version: 4)

13-Apr-2005 10:56 AM

Generator: MOSS, WILLIAM DAVID FWO-WFM
WMC: TORREZ, STEVE NWS-SWO
FROM: FWO-SWO

MS : E518
MS : E518
MS : J595/5-4000

WASTE PROFILE (WPF) EXTENSION QUESTIONNAIRE

Our files indicate that your WPF#: 33739 was submitted approximately one year ago. Please review the attached copy and answer the following questions concerning your waste stream to determine whether to renew or void your WPF. Please return the completed questionnaire to FWO-SWO at the address listed below. If your waste stream remains the same, your WPF will be extended for another year. If the original generator is no longer with the generating group or generating this waste, a new WPF will need to be filled out with a new generator. Upon receipt of this questionnaire with a signed Extension Certification, we will send you a return receipt indicating that your WPF is valid for another year. If there are changes in your waste stream, a new WPF will need to be completed.

Are you currently producing the same type of waste as indicated on your WPF#: 33739

YES NO

If yes, please sign the Extension Certification below

If no, will you be producing the same type of waste in the near future?

YES NO

If yes, please sign the Extension Certification below

If no, will you be producing a different type of waste?

YES NO

If no, sign the Void Approval below to indicate that your WPF should be voided

If yes, please submit a new WPF, along with this memo. We will then void your previous WPF and process a new one

Extension Certification

I am producing or will produce the same type of waste as indicated in WPF# 33739

Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Extension->

Signed

William David Moss

Date

04/19/05

Void Approval

I will no longer be generating or will be producing a different type or composition (a new WPF will be submitted) of waste as indicated in WPF# 33739

Void->

Signed _____

Date _____

NOTE: PLEASE FOLD AND STAPLE THE FORM TO THE LINE BELOW AND RETURN TO ADDRESS PROVIDED

TO: FWO-SWO

MS: J595

PHONE: 5-4000



WASTE PROFILE FORM

WPF #: 33739

18-Apr-2006 12:49 PM

(Version: 5)

Generator : MOSS, WILLIAM DAVID FWOVFM	MS : E518
WMC : TORREZ, STEVE NWIS-OS	MS : E518
FROM : NWIS-SWO	MS : J595/5-4000

WASTE PROFILE (WPF) EXTENSION QUESTIONNAIRE

Our files indicate that your WPF#: 33739 was submitted approximately one year ago. Please review the attached copy and answer the following questions concerning your waste stream to determine whether to renew or void your WPF. Note: Only the generator can sign for the extension (to renew). Please return the signed questionnaire to NWIS-SWO at the address listed below. If your waste stream remains the same, your WPF will be extended for another year. Upon approval of this signed Extension Certification, you will receive a notice indicating that your WPF is valid for another year. If there are changes in your waste stream, a new WPF will need to be completed.

Are you currently the same generator as indicated above?

YES NO

Are you currently producing the same type of waste as indicated on WPF#: 33739

YES NO

If yes, please sign the Extension Certification below

If no, will you be producing the same type of waste in the near future?

YES NO

If yes, please sign the Extension Certification below

If no, will you be producing a different type of waste?

YES NO

If no, sign the Void Approval below to indicate that your WPF should be voided

If yes, please submit a new WPF, along with this memo. We will then

void your previous WPF and process a new one

Extension Certification

I am producing or will produce the same type of waste as indicated in WPF# 33739 Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the waste characterization information on this form is correct and that it meets the requirements of the applicable waste acceptance criteria. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Extension-> Signed *Wm David Moss* Z# 091973 Date 04/21/06

Void Approval

I will no longer be generating or will be producing a different type or composition (a new WPF will be submitted) of waste as indicated in WPF# 33739

Void-> Signed _____ Date _____

NOTE: PLEASE FOLD AND STAPLE THE FORM TO THE LINE BELOW AND RETURN TO ADDRESS PROVIDED

TO: NWIS-SWO

MS: J595

PHONE: 5-4000

LOS ALAMOS NATIONAL LABORATORY
WASTE PROFILE SYSTEM

WPF #: 33739

18-Apr-2006 12:49 PM

(Version: 5)

p.8

GWCP Information

Section 1 - Waste Prevention/Minimization (answer all questions)

Can hazard segregation, elimination, or material substitution be used?

Yes* No

Can any of the materials in the waste stream be recycled or reused?

Yes* No

Has waste minimization been incorporated into procedures or other process controls?

Yes No

Can this waste be generated outside a RCA?

Yes* No N/A

*Provide Comment

Section 6 - Work Control Documentation (answer all questions)

Do the procedures for this process cover how to manage this waste?

Yes No (Provide comments)

Do the procedures for this process cover controls to prevent changes to waste constituents and concentrations or addition or removal of waste?

Yes No (Provide comments)

Section 7 - Package and Storage Control

Describe how the waste will be packaged in according to the applicable WAC: *Waste water to be discharged into the RLWES*

Identify the storage management controls that will be used for this waste stream: (check all that apply)

- Tamper indication devices:
- Limited use locks with log-in for waste
- Locked cabinet or building
- Other (describe)

Section 8 - Waste Certification Statements (check only one)

- Waste appears to meet WAC chapter for: *LANL WAC Chapter 3 (RLWTF)*
- Waste needs exception/exemption for treatment, storage, or disposal at:
- Waste does not meet the criteria for any known TSDF, (DOE approval is required. Contact the Waste Management Program Office for assistance.)

Estimated Annual Volume (m3): *1060 m³*

280,000 L / year \approx 1060 m³



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 Suite 305
 Los Alamos, NM 87544
 Contact: Troy Eshleman
 Project: LANL

Report Date: April 12, 2001

Page 2 of 5

Client Sample ID: TKSE 020128
 Sample ID: 38797001

Project: GTSD00301
 Client ID: GTSD001

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Volatile Organics										
<i>TCLP Volatiles in Liquid</i>										
Plutonium-238		992	+/-150	4.38	1.00	pCi/L	TOH2	03/14/01	1731	68190 9
Plutonium-239/240		511	+/-79.1	2.45	1.00	pCi/L				
Plutonium-244	U	ND	+/-1.24	1.86	1.00	pCi/L				
<i>Alphaspec Th, liquid</i>										
Thorium-228	U	ND	+/-2.01	8.04	1.00	pCi/L	HOT1	03/19/01	1115	68192 10
Thorium-230	U	ND	+/-1.27	13.9	1.00	pCi/L				
Thorium-232	U	ND	+/-2.01	7.88	1.00	pCi/L				
<i>Alphaspec U, liquid</i>										
Uranium-233/234		115	+/-33.9	16.2	1.00	pCi/L	HOT1	03/19/01	0940	68191 11
Uranium-235/236	U	ND	+/-4.23	12.5	1.00	pCi/L				
Uranium-238	U	ND	+/-1.36	12.4	1.00	pCi/L				
Rad Liquid Scint										
<i>LSC, Tritium Dist. liquid</i>										
Tritium		1.280E+06	+/-4440	336	700	pCi/L	SGL1	03/11/01	0011	68142 12
Semi-Volatiles-GC/MS										
<i>TCLP BNA H2O 8270C 3510C</i>										
1,4-Dichlorobenzene	U	ND	0.00915	0.750	mg/L	1	TSD	03/20/01	1408	69337 13
2,4,5-Trichlorophenol	U	ND	0.0059	40.0	mg/L	1				
2,4,6-Trichlorophenol	U	ND	0.0056	0.200	mg/L	1				
2,4-Dinitrotoluene	U	ND	0.00485	0.130	mg/L	1				
Hexachlorobenzene	U	ND	0.00535	0.130	mg/L	1				
Hexachlorobutadiene	U	ND	0.0088	0.100	mg/L	1				
Hexachloroethane	U	ND	0.0085	0.300	mg/L	1				
Nitrobenzene	U	ND	0.0071	0.200	mg/L	1				
Pentachlorophenol	U	ND	0.0079	10.0	mg/L	1				
Pyridine	U	ND	0.011	0.500	mg/L	1				
m,p-Cresols	U	ND	0.00535	20.0	mg/L	1				
o-Cresol	U	ND	0.0063	20.0	mg/L	1				
Semi-Volatiles-HERB										
<i>SI51A TCLP HERB Liq</i>										
2,4,5-TP	U	ND	0.0188	0.100	mg/L	20	CAK	03/20/01	1220	69587 14
2,4-D	U	ND	0.018	1.00	mg/L	20				
Semi-Volatiles-PEST										
<i>8081A/3510C TCLP PEST Liq</i>										
Chlordane (tech.)	U	ND	0.00213	0.003	mg/L	1	SJ	03/16/01	1725	69173 16
Endrin	U	ND	0.000059	0.002	mg/L	1				
Heptachlor	U	ND	0.000032	0.008	mg/L	1				
Heptachlor epoxide	U	ND	0.000034	0.008	mg/L	1				
Methoxychlor	U	ND	0.000326	1.00	mg/L	1				

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 Suite 305
 Los Alamos, NM 87544
 Contact: Troy Eshleman
 Project: LANL

Report Date: April 12, 2001

Page 3 of 5

Client Sample ID: TKSE 020128
 Sample ID: 38797001

Project: GTSD00301
 Client ID: GTSD001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Semi-Volatiles-PEST											
<i>8081A/3510C TCLP PEST Liq</i>											
Toxaphene	U	ND	0.00268	0.050	mg/L	1					
gamma-BHC (Lindane)	U	ND	0.000024	0.040	mg/L	1					
TOC Analysis											
<i>EPA 415.1 Total Organic Carbon</i>											
Total Organic Carbon		75.0	0.203	1.00	mg/L	5	MS1	03/15/01	1311	68926	18
TRAACS Nutrient Analysis											
<i>EPA 351.2/353.1 Total Nitrogen</i>											
Total Nitrogen		22600000	56.5	100	ug/L	1	THL	03/22/01	1354	70037	19
<i>EPA 353.1 Nitrogen, (NO3/NO2)</i>											
Nitrogen, Nitrate/Nitrite		22600	69.0	500	mg/L	10000	THL	03/09/01	1309	68138	20
<i>Nitrogen, Total Kjeldahl (TKN)</i>											
Nitrogen, Total Kjeldahl		0.580	0.0565	0.100	mg/L	1	THL	03/12/01	2028	68556	21
Volatile Organics											
<i>TCLP Volatiles in Liquid</i>											
1,1-Dichloroethylene	U	ND	0.0028	0.070	mg/L	10	JEB	03/13/01	1159	68649	22
1,2-Dichloroethane	U	ND	0.0014	0.050	mg/L	10					
1,4-Dichlorobenzene	U	ND	0.0014	0.750	mg/L	10					
2-Butanone	J	0.509	0.0081	20.0	mg/L	10					
Benzene	U	ND	0.0014	0.050	mg/L	10					
Carbon tetrachloride	U	ND	0.0016	0.050	mg/L	10					
Chlorobenzene	U	ND	0.002	10.0	mg/L	10					
Chloroform	U	ND	0.0017	0.600	mg/L	10					
Tetrachloroethylene	U	ND	0.0021	0.070	mg/L	10					
Trichloroethylene	U	ND	0.0016	0.050	mg/L	10					
Vinyl chloride	U	ND	0.0026	0.020	mg/L	10					

The following Prep Methods were performed

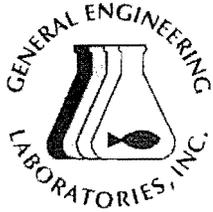
Method	Description	Analyst	Date	Time	Prep Batch
EPA 351.2	EPA 351.2 Total Kjeldahl Nitrogen	THL	03/12/01	2028	68556
EPA 351.2 Prep	EPA 351.2 Total Kjeldahl Nitrogen Prep	TEMP	03/10/01	1640	68086
SW846 1311	SW846 1311 TCLP Leaching	JL	03/12/01	1400	68380
SW846 1311	SW846 1311 TCLP Volatiles Prep	JL	03/12/01	1400	68385
SW846 3005A	ICP-TRACE SW846 3005A	FDG	03/09/01	1000	68074
SW846 3510C	3510C BNA TCLP Prep-8270C Analysis	GMS	03/16/01	0900	69159
SW846 3510C	3510C PEST TCLP Liquid Prep	AEJ	03/15/01	1300	68957
SW846 7470A	EPA 7470 Mercury Prep Liquid	ARD	04/10/01	2000	72442
SW846 8151A Pre	8151A HERB TCLP Prep in Liquid	HDB	03/19/01	0600	69367

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 Los Alamos, NM 87544
 Contact: Troy Eshleman
 Project: LANL

Report Date: April 12, 2001

Page 4 of 5

Client Sample ID: TKSE 020128
 Sample ID: 38797001

Project: GTSD00301
 Client ID: GTSD001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
-----------	-----------	--------	----	----	-------	----	---------	------	------	-------	--------

The following Analytical Methods were performed

Method	Description
--------	-------------

- 1 SW846 7470A
- 2 SW846 3005/6010B
- 3 SW846 3005/6010B
- 4 SW846 3005/6010B
- 5 SW846 3005/6010B
- 6 SW846 3005/6010B
- 7 DOE EML HASL 300
- 8 DOE EML HASL 300
- 9 DOE EML HASL 300
- 10 DOE EML HASL 300
- 11 DOE EML HASL 300
- 12 EPA 906.0
- 13 SW846 8270C
- 14 SW846 8151A
- 15 SW846 8151A
- 16 SW846 8081A
- 17 SW846 8081A
- 18 EPA 415.1
- 19 EPA 351.2/353.1
- 20 EPA 353.1
- 21 EPA 351.2
- 22 SW846 8260B

2,4,6-Tribromophenol	TCLP BNA H2O 8270C 3510C	87%	(33%-121%)
2-Fluorobiphenyl	TCLP BNA H2O 8270C 3510C	81%	(39%-109%)
2-Fluorophenol	TCLP BNA H2O 8270C 3510C	44%	(16%-83%)

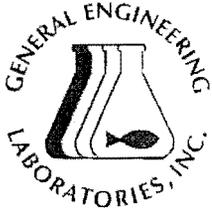
Surrogate recovery	Test	Recovery %	Acceptable Limits
Nitrobenzene-d5	TCLP BNA H2O 8270C 3510C	76%	(34%-111%)
Phenol-d5	TCLP BNA H2O 8270C 3510C	26%	(14%-65%)
p-Terphenyl-d14	TCLP BNA H2O 8270C 3510C	101%	(29%-132%)
2,4-Dichlorophenylacetic acid	8151A TCLP HERB Liq	93%	(36%-121%)
4cmx	8081A/3510C TCLP PEST Liq	91%	(43%-113%)
Decachlorobiphenyl	8081A/3510C TCLP PEST Liq	88%	(56%-103%)
Bromofluorobenzene	TCLP Volatiles in Liquid	83%	(58%-137%)

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Address : 190 Central Park Square
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Los Alamos, NM 87544
Contact: Troy Eshleman
Project: LANL

Report Date: April 12, 2001

Page 5 of 5

Client Sample ID: TKSE 020128
Sample ID: 38797001

Project: GTSD00301
Client ID: GTSD001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Dibromofluoromethane	TCLP	Volatiles in Liquid		89%		(56%-134%)					
Toluene-d8	TCLP	Volatiles in Liquid		82%		(52%-134%)					

Notes:

The Qualifiers in this report are defined as follows :

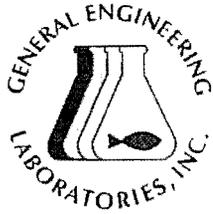
- ** Indicates the analyte is a surrogate compound.
- < Actual result is less than amount reported
- > Actual result is greater than amount reported
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the compound was analyzed for but not detected above the detection limit

The above sample is reported on an "as received" basis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, Inc. standard operating procedures. Please direct any questions to your Project Manager, Jake Crook at (843) 556-8171 Ext. 4422.

Reviewed by





GENERAL ENGINEERING LABORATORIES

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Certificate of Analysis

Company : Waste Mngmnt Federal Services
 Address : 190 Central Park Square
 Suite 305
 Los Alamos, NM 87544
 Contact: Troy Eshleman
 Project: LANL

Report Date: March 28, 2001

Page 1 of 5

Client Sample ID: TKSE 020128
 Sample ID: 38797001
 Matrix: Misc Liquid
 Collect Date: 28-FEB-01
 Receive Date: 08-MAR-01
 Collector: Client
 Project: GTSD00301
 Client ID: GTSD001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP											
<i>6010/3005 Target Analyte List</i>											
Aluminum		559	343	500	ug/L	1	RMJ	03/16/01	2016	68276	1
Antimony	U	ND	38.0	100	ug/L	1					
Arsenic	U	ND	45.7	50.0	ug/L	1					
Barium		281	2.06	50.0	ug/L	1					
Beryllium	U	ND	2.03	50.0	ug/L	1					
Cadmium	J	22.3	2.51	50.0	ug/L	1					
Calcium		1340000	375	1000	ug/L	1					
Chromium		133	7.81	50.0	ug/L	1					
Cobalt	J	17.0	2.95	50.0	ug/L	1					
Copper		465	26.7	50.0	ug/L	1					
Iron		1330	206	500	ug/L	1					
Magnesium		95500	44.9	200	ug/L	1					
Manganese		131	29.4	100	ug/L	1					
Nickel		664	7.43	50.0	ug/L	1					
Selenium	U	ND	30.9	50.0	ug/L	1					
Silica		45800	284	2130	ug/L	1					
Silicon		21600	133	1000	ug/L	1					
Silver	J	16.0	1.97	50.0	ug/L	1					
Thallium	U	ND	41.3	100	ug/L	1					
Vanadium	U	ND	10.9	50.0	ug/L	1					
Zinc		700	28.1	50.0	ug/L	1					
Lead	U	ND	344	500	ug/L	10	HSC	03/20/01	2225	68276	2
Potassium		20500000	7070	100000	ug/L	100	RMJ	03/21/01	1509	68276	4
Sodium		37800000	8130	100000	ug/L	100					
Rad Alpha Spec											
<i>Alphaspec Am241, Cm, liquid</i>											
Americium-241		4060	+/-870	129	1.00	pCi/L	SWM	03/26/01	1930	68189	6
Curium-242	U	ND	+/-2.00	82.3	1.00	pCi/L					
Curium-243/244	U	ND	+/-23.8	185	1.00	pCi/L					
Curium-245/246		114	+/-115	85.3	1.00	pCi/L					
<i>Alphaspec Np, liquid</i>											
Neptunium-237		8.86	+/-3.11	1.60	1.00	pCi/L	SWM	03/15/01	1436	68458	7
<i>Alphaspec Pu, liquid</i>											
Plutonium-238		992	+/-150	4.38	1.00	pCi/L	TOH2	03/14/01	1731	68190	8
Plutonium-239/240		511	+/-79.1	2.45	1.00	pCi/L					
Plutonium-244	U	ND	+/-1.24	1.86	1.00	pCi/L					
<i>Alphaspec Th, liquid</i>											

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Certificate of Analysis

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 Project: LANL

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Client Sample ID: TKSE 020128
 Sample ID: 38797001

Project: GTSD00301
 Client ID: GTSD001

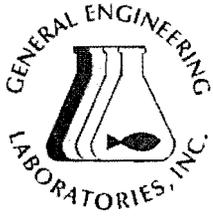
Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Volatile Organics											
<i>TCLP Volatiles in Liquid</i>											
Thorium-228	U	ND	+/-2.01	8.04	1.00	pCi/L	HOT1	03/19/01	1115	68192	9
Thorium-230	U	ND	+/-1.27	13.9	1.00	pCi/L					
Thorium-232	U	ND	+/-2.01	7.88	1.00	pCi/L					
<i>Alphaspec U, liquid</i>											
Uranium-233/234		115	+/-33.9	16.2	1.00	pCi/L	HOT1	03/19/01	0940	68191	10
Uranium-235/236	U	ND	+/-4.23	12.5	1.00	pCi/L					
Uranium-238	U	ND	+/-1.36	12.4	1.00	pCi/L					
Rad Liquid Scint											
<i>LSC, Tritium Dist, liquid</i>											
Tritium		1.280E+06	+/-4440	336	700	pCi/L	SGL1	03/11/01	0011	68142	11
Semi-Volatiles-GC/MS											
<i>TCLP BNA H2O 8270C 3510C</i>											
1,4-Dichlorobenzene	U	ND	0.00915	0.750	mg/L	1	TSD	03/20/01	1408	69337	12
2,4,5-Trichlorophenol	U	ND	0.0059	40.0	mg/L	1					
2,4,6-Trichlorophenol	U	ND	0.0056	0.200	mg/L	1					
2,4-Dinitrotoluene	U	ND	0.00485	0.130	mg/L	1					
Hexachlorobenzene	U	ND	0.00535	0.130	mg/L	1					
Hexachlorobutadiene	U	ND	0.0088	0.100	mg/L	1					
Hexachloroethane	U	ND	0.0085	0.300	mg/L	1					
Nitrobenzene	U	ND	0.0071	0.200	mg/L	1					
Pentachlorophenol	U	ND	0.0079	10.0	mg/L	1					
Pyridine	U	ND	0.011	0.500	mg/L	1					
m,p-Cresols	U	ND	0.00535	20.0	mg/L	1					
o-Cresol	U	ND	0.0063	20.0	mg/L	1					
Semi-Volatiles-HERB											
<i>8151A TCLP HERB Liq</i>											
2,4,5-TP	U	ND	0.0188	0.100	mg/L	20	CAK	03/20/01	1220	69587	13
2,4-D	U	ND	0.018	1.00	mg/L	20					
Semi-Volatiles-PEST											
<i>8081A/3510C TCLP PEST Liq</i>											
Chlordane (tech.)	U	ND	0.00213	0.003	mg/L	1	SJ	03/16/01	1725	69173	15
Endrin	U	ND	0.000059	0.002	mg/L	1					
Heptachlor	U	ND	0.000032	0.008	mg/L	1					
Heptachlor epoxide	U	ND	0.000034	0.008	mg/L	1					
Methoxychlor	U	ND	0.000326	1.00	mg/L	1					
Toxaphene	U	ND	0.00268	0.050	mg/L	1					
gamma-BHC (Lindane)	U	ND	0.000024	0.040	mg/L	1					
TOC Analysis											
<i>EPA 415.1 Total Organic Carbon</i>											

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Client Sample ID: TKSE 020128
 Sample ID: 38797001
 Project: GTSD00301
 Client ID: GTSD001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
TOC Analysis											
<i>EPA 415.1 Total Organic Carbon</i>											
Total Organic Carbon		75.0	0.203	1.00	mg/L	5	MS1	03/15/01	1311	68926	17
TRAACS Nutrient Analysis											
<i>EPA 351.2/353.1 Total Nitrogen</i>											
Total Nitrogen		22600000	56.5	100	ug/L	1	THL	03/22/01	1354	70037	18
<i>EPA 353.1 Nitrogen, (NO3/NO2)</i>											
Nitrogen, Nitrate/Nitrite		22600	69.0	500	mg/L	10000	THL	03/09/01	1309	68138	19
<i>Nitrogen, Total Kjeldahl (TKN)</i>											
Nitrogen, Total Kjeldahl		0.580	0.0565	0.100	mg/L	1	THL	03/12/01	2028	68556	20
Volatile Organics											
<i>TCLP Volatiles in Liquid</i>											
1,1-Dichloroethylene	U	ND	0.0028	0.070	mg/L	10	JEB	03/13/01	1159	68649	21
1,2-Dichloroethane	U	ND	0.0014	0.050	mg/L	10					
1,4-Dichlorobenzene	U	ND	0.0014	0.750	mg/L	10					
2-Butanone	J	0.509	0.0081	20.0	mg/L	10					
Benzene	U	ND	0.0014	0.050	mg/L	10					
Carbon tetrachloride	U	ND	0.0016	0.050	mg/L	10					
Chlorobenzene	U	ND	0.002	10.0	mg/L	10					
Chloroform	U	ND	0.0017	0.600	mg/L	10					
Tetrachloroethylene	U	ND	0.0021	0.070	mg/L	10					
Trichloroethylene	U	ND	0.0016	0.050	mg/L	10					
Vinyl chloride	U	ND	0.0026	0.020	mg/L	10					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 351.2	EPA 351.2 Total Kjeldahl Nitrogen	THL	03/12/01	2028	68556
EPA 351.2 Prep	EPA 351.2 Total Kjeldahl Nitrogen Prep	TEMP	03/10/01	1640	68086
SW846 1311	SW846 1311 TCLP Leaching	JL	03/12/01	1400	68380
SW846 1311	SW846 1311 TCLP Volatiles Prep	JL	03/12/01	1400	68385
SW846 3005A	ICP-TRACE SW846 3005A	FDG	03/09/01	1000	68074
SW846 3510C	3510C BNA TCLP Prep-8270C Analysis	GMS	03/16/01	0900	69159
SW846 3510C	3510C PEST TCLP Liquid Prep	AEJ	03/15/01	1300	68957
SW846 8151A Prt	8151A HERB TCLP Prep in Liquid	HDB	03/19/01	0600	69367

The following Analytical Methods were performed

Method	Description
1	SW846 3005/6010B
2	SW846 3005/6010B

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Client Sample ID: TKSE 020128
 Sample ID: 38797001

Project: GTSD00301
 Client ID: GTSD001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
3	SW846	3005/6010B									
4	SW846	3005/6010B									
5	SW846	3005/6010B									
6	DOE EML	HASL 300									
7	DOE EML	HASL 300									
8	DOE EML	HASL 300									
9	DOE EML	HASL 300									
10	DOE EML	HASL 300									
11	EPA	906.0									
12	SW846	8270C									
13	SW846	8151A									
14	SW846	8151A									
15	SW846	8081A									
16	SW846	8081A									
17	EPA	415.1									
18	EPA	351.2/353.1									
19	EPA	353.1									
20	EPA	351.2									
21	SW846	8260B									

Surrogate recovery	Test	Recovery%	Acceptable Limits
2,4,6-Tribromophenol	TCLP BNA H2O 8270C 3510C	87%	(33%-121%)
2-Fluorobiphenyl	TCLP BNA H2O 8270C 3510C	81%	(39%-109%)
2-Fluorophenol	TCLP BNA H2O 8270C 3510C	44%	(16%-83%)
Nitrobenzene-d5	TCLP BNA H2O 8270C 3510C	76%	(34%-111%)
Phenol-d5	TCLP BNA H2O 8270C 3510C	26%	(14%-65%)
p-Terphenyl-d14	TCLP BNA H2O 8270C 3510C	101%	(29%-132%)
2,4-Dichlorophenylacetic acid	8151A TCLP HERB Liq	93%	(36%-121%)
4cmx	8081A/3510C TCLP PEST Liq	91%	(43%-113%)
Decachlorobiphenyl	8081A/3510C TCLP PEST Liq	88%	(56%-103%)
Bromofluorobenzene	TCLP Volatiles in Liquid	83%	(58%-137%)
Dibromofluoromethane	TCLP Volatiles in Liquid	89%	(56%-134%)
Toluene-d8	TCLP Volatiles in Liquid	82%	(52%-134%)

Notes:

The Qualifiers in this report are defined as follows :





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Client Sample ID: TKSE 020128
Sample ID: 38797001

Project: GTSD00301
Client ID: GTSD001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
-----------	-----------	--------	----	----	-------	----	---------	------	------	-------	--------

- ** Indicates the analyte is a surrogate compound.
- < Actual result is less than amount reported
- > Actual result is greater than amount reported
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the compound was analyzed for but not detected above the detection limit

The above sample is reported on an "as received" basis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, Inc. standard operating procedures. Please direct any questions to your Project Manager, Jake Crook at (843) 556-8171 Ext. 4422.

Reviewed by



ATTACHMENT D

**LOS ALAMOS NATIONAL LABORATORY
WASTE PROFILE SYSTEM**

WPF #: 32733

31-Jan-2008 11:45 AM

(Version: 2)

p.1

Generator :	WOLFSBERG, LAURA	MS :	J514	PH :	59795	Z#:	117048
WMC :	PETERSEN, ROBYN	MS :	C925	PH :	5056659054	Z#:	086572
Contact :							
RCRA Rev :	ELICIO ANDY U	MS :	J599	PH :	5056676956	Z#:	118692
Status :	VOID	Activation Date :	10/13/2000	Expiration Date:	10/13/2002		
Group :	EET	TA :	48	Bldg :	000001	Room :	4

You are required to keep a copy of the WPF(s) in your files for at least three years. This WPF(s) is valid for one year or as long as the composition of the waste you have characterized remains the same. Should your waste change, please submit a new WPF to Waste Acceptance Group.

Waste Accumu : **None of the Above Site ID#**
 Method of Char : **Analysis/Documents Attached**
 Acceptable Knowledge Documentation Number: **JR-2000-22**
 MSDS

Waste Type : **Process Waste/Spent Chemical/Other**
 Waste Classes: **RCA Waste - Not RCA Waste**
 RAD Waste - Non-rad
 WW Info - RLWTF
 Classif/Sensi - N

Waste Category: **Inorganic**

Waste Sources : **Materials Processing/Production**

Waste Matrix : **Aqueous**

Matrix Type : **Homogeneous**

Process Desc :
 2% NITRIC ACID SOLUTION USED IN SAMPLE PROCESSING FOR
 EXTRACTION OF TRACER CONSTITUENTS. RESIDUAL 2% NITRIC ACID
 WILL BE DILUTED WITH DI H2O TO REMOVE FROM ROCK SAMPLES AND
 FILTER PAPER SAMPLES AND PUT DOWN RLWTF. MAXIMUM
 CONCENTRATION OF NITRIC ACID SOLUTION AFTER DILUTION WILL BE
 1% HNO3 DOWN RLWTF. JEFF ROACH 7/10/00

Waste Desc : **N/A**

Ignitability : **Not ignitable**

Corrosivity : **<= 2.0**

Reactivity : **Non-reactive**

Boiling Point : **> 95 F > 35 C**

Toxicity Characteristic Metals: **N/A**

Toxicity Characteristic Organic Compounds: **N/A**

Additional Chemical Constituents and Contaminants:

CAS NO	Constituent	MIN	MAX	UOM
	HNO3	0.5	1	%

**LOS ALAMOS NATIONAL LABORATORY
WASTE PROFILE SYSTEM**

WPF #: 32733

31-Jan-2008 11:45 AM

(Version: 2)

p.2

WATER	99	99.5	%
2,3,4,5 TETRAFLUOROBENZOIC ACID	0.0000001	0.01	%
2,4 DIFLUOROBENZOIC ACID	0.0000001	0.01	%
2,4,5 TRIFLUOROBENZOIC ACID	0.0000001	0.01	%
2,6 DIFLUOROBENZOIC ACID	0.0000001	0.01	%
CERIUM III CHLORIDE HEPTAHYDRATE	0.0000001	0.005	%
COBALT (II) CHLORIDE HEXAHYDRATE	0.0000001	0.001	%
LITHIUM BROMIDE	0.0000001	0.1	%
MAGANESE CHLORIDE	0.0000001	0.001	%
NICKEL CHLORIDE	0.0000001	0.001	%
PENTAFLUOROBENZOIC ACID	0.0000001	0.1	%
POTASSIUM IODIDE	0.0000001	0.001	%
PYRIDONE	0.0000001	0.01	%
RHODAMINE WT	0.0000001	0.001	%
SAMARIUM III CHLORIDE HEXAHYDRATE	0.0000001	0.005	%
SODIUM HYDROXIDE	0.0000001	0.001	%
URANINE (SODIUM FLUORESCIN)	0.0000001	0.05	%
POLYSTYRENE LATEX MICROSPERES	0.0000001	0.01	%

Additional Information: PH OF 1% NITRIC SOLUTION WAS MEASURED WITH
WHAT MAN PH INDICATOR STRIPS 0-14 PH SCALE. PH-1.0 JEFF ROACH

7/10/00

Waste Water Characteristics for RLWTF

Waste Production: Other

Additional Contaminants:

Contaminant	Limit	Min	Max	Unit	Method
TOTAL NITRATES		10000	10000	mg/l	
Total Alpha:	0.00E+00	Ci/l			
Total Beta:	0.00E+00	Ci/l			
Total Gamma:	0.00E+00	Ci/l			

Average daily flow when discharge occurs: 2 LIT

Maximum daily flow when discharge occurs: 4 LIT

Estimated number of days discharge will occur: 100

Estimated total volume per year discharged to the RLWC at TA-50: 400 LIT

LDR and Underlying Hazardous Constituents Information

Non-Wastewater/Wastewater Category: **Non Wastewater**

WASTE CHARACTERIZATION INFORMATION

Radioactivity Category : **NON-RAD**

RCRA Category : **HAZARDOUS WASTE**

Secondary Info : N/A

Waste Classification : **HAZARDOUS WASTE**

Waste Acceptances : **TA-50 Acceptance**

EPA Hazardous Waste Code : **D002**

Notification Of Underlying Hazardous Constituents:

Constituents

LOS ALAMOS NATIONAL LABORATORY
WASTE PROFILE SYSTEM

WPF #: 32733

31-Jan-2008 11:45 AM

(Version: 2)

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No Underlying Hazardous Constituents in this waste stream

LOS ALAMOS NATIONAL LABORATORY
WASTE PROFILE SYSTEM

WPF #: 32733

31-Jan-2008 11:45 AM

(Version: 2)

p.4

GWCP Information

Section 1 - Waste Prevention/Minimization (answer all questions)

Can hazard segregation, elimination, or material substitution be used?

Yes* No

Can any of the materials in the waste stream be recycled or reused

Yes* No

Has waste minimization been incorporated into procedures or other process controls?

Yes No

Can this waste be generated outside a RCA?

Yes* No N/A

*Provide Comment

Section 6 - Work Control Documentation (answer all questions)

Do the procedures for this process cover how to manage this waste?

Yes No (Provide comments)

Do the procedures for this process cover controls to prevent changes to waste constituents and concentrations or addition or removal of waste?

Yes No (Provide comments)

Section 7 - Package and Storage Control

Describe how the waste will be packaged in according to the applicable WAC:

Identify the storage management controls that will be used for this waste stream: (check all that apply)

- Tamper indication devices:
- Limited use locks with log-in for waste
- Locked cabinet or building
- Other (describe)

Section 8 - Waste Certification Statements (check only one)

- Waste appears to meet WAC chapter for:
- Waste needs exception/exemption for treatment, storage, or disposal at:
- Waste does not meet the criteria for any known TSDF, (DOE approval is required. Contact the Waste Management Program Office for assistance.)

Estimated Annual Volume (m3):

RECEIVED JUL 18 2000

Contact (if other than given below)	For rapid processing, complete all sections in black or blue ink and mail to: EM-SWO at MS J595. For assistance with completing this form, call EM-SWO at 5-4000.	Reference Number 32733 (For EM-SWO use only.)
-------------------------------------	--	--

Generator's Z Number 111738	Waste Generator's Name (print) Jeff Roach	WMC's Z Number 086572	WMC's Name (print) Robin Peterson
Generator's Telephone 5-9795	Generator's Mail Stop 5514	Waste Generating Group E-ET	Waste Stream Technical Area 48
		Building 1	Room 4

Waste Accumulation (Check only one.)

<input type="checkbox"/> Satellite Accumulation Area	Site no: _____
<input type="checkbox"/> Less-than-90-days Storage Area	Site no: _____
<input type="checkbox"/> TSDF	Site no: _____
<input type="checkbox"/> Universal Waste Storage Area	Site no: _____
<input checked="" type="checkbox"/> None of the Above	

ER Use Only ER Site PRS #: _____

Method of Characterization (Check as many as apply.)

<input checked="" type="checkbox"/> Analysis/Documents Attached	<input type="checkbox"/> Chemical/Physical Analysis	Sample #: _____
	<input type="checkbox"/> Radiological Analysis	Sample #: _____
	<input type="checkbox"/> PCB Analysis	Sample #: _____
	<input checked="" type="checkbox"/> Acceptable Knowledge Documentation	Documentation #: ER-2000-22
	<input checked="" type="checkbox"/> MSDS	

Section 1 - Chemical and Physical Information

Waste Type (Check only one.)	Waste Category (Check as many as apply.)	Waste Source (Check only one.)	Waste Matrix (Check only one.)
<input type="checkbox"/> Unused/Unspent Chemical (Complete all sections as appropriate.) <input checked="" type="checkbox"/> Process Waste/Spent Chemical/other (Complete all sections.) <input type="checkbox"/> Green is Clean Waste (Complete all sections as appropriate.)	<input checked="" type="checkbox"/> Inorganic <input type="checkbox"/> Organic Volatile Organics <input type="checkbox"/> < 500 ppm <input type="checkbox"/> ≥ 500 ppm <input type="checkbox"/> Solvent * <input type="checkbox"/> Degreaser * <input type="checkbox"/> Dioxin <input type="checkbox"/> Electroplating <input type="checkbox"/> Treated Hazardous waste residue <input type="checkbox"/> Explosive process <input type="checkbox"/> Infectious/Medical <input type="checkbox"/> Biological <input type="checkbox"/> Beryllium <input type="checkbox"/> Empty Container (See instructions) <input type="checkbox"/> Battery (See instructions) Asbestos <input type="checkbox"/> friable <input type="checkbox"/> non-friable PCB Source Concentration <input type="checkbox"/> PCB < 50 ppm <input type="checkbox"/> PCB ≥ 50 - < 500 ppm <input type="checkbox"/> PCB ≥ 500 ppm <input type="checkbox"/> Other (Describe below)	Routine Waste <input type="checkbox"/> Decon <input checked="" type="checkbox"/> Materials Processing/Production <input type="checkbox"/> Research/Development/Testing <input type="checkbox"/> Scheduled Maintenance <input type="checkbox"/> Housekeeping - Routine <input type="checkbox"/> Spill Cleanup - Routine <input type="checkbox"/> Sampling - Routine Monitoring <input type="checkbox"/> Other (Describe below) Non-routine Waste <input type="checkbox"/> Abatement <input type="checkbox"/> Construction/Upgrades <input type="checkbox"/> Demolition <input type="checkbox"/> Decon/Decom <input type="checkbox"/> Investigative Derived <input type="checkbox"/> Orphan/Legacy <input type="checkbox"/> Remediation/Restoration <input type="checkbox"/> Repacking (Secondary) <input type="checkbox"/> Unscheduled Maintenance <input type="checkbox"/> Housekeeping - Non-routine <input type="checkbox"/> Spill Cleanup - Non-routine <input type="checkbox"/> UST - Non-petroleum <input type="checkbox"/> UST - Petroleum <input type="checkbox"/> Other (Describe below)	Gas <input type="checkbox"/> ≤ 1.5 Atmospheres pressure <input type="checkbox"/> > 1.5 Atmospheres pressure <input type="checkbox"/> Liquefied compressed gas Liquid <input checked="" type="checkbox"/> Aqueous <input type="checkbox"/> Non-aqueous <input type="checkbox"/> Suspended Solids/ Aqueous <input type="checkbox"/> Suspended Solids/ Non-aqueous Solid <input type="checkbox"/> Powder/Ash <input type="checkbox"/> Solid <input type="checkbox"/> Sludge <input type="checkbox"/> Absorbed liquid Matrix Type (Check only one.) <input checked="" type="checkbox"/> Homogeneous <input type="checkbox"/> Heterogeneous (Describe below)
Waste Classes Radiological Information Was Waste Generated in a RCA? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Non-radioactive <input type="checkbox"/> Radioactive <input type="checkbox"/> Low-Level <input type="checkbox"/> Transuranic	Wastewater Information <input type="checkbox"/> Wastewater for SWSC (TA-46) (Complete Attachment 1) <input checked="" type="checkbox"/> Wastewater for RLWTF (TA-50/TA-21) (Complete Attachment 2) <input type="checkbox"/> Wastewater for TA-16 (HE)	Classification Information <input checked="" type="checkbox"/> Unclassified <input type="checkbox"/> Classified/Sensitive	

Waste/Process Description (Chemical formulas may be used in this field.)

2% Nitric Acid Solution used in sample processing for extraction of tracer constituents. Residual 2% Nitric Acid will be diluted with DI H₂O to remove from rock samples and filter paper samples and put down RLWTF. Maximum concentration of Nitric Acid solution after dilution will be 1% HNO₃ down RLWTF. Jeff Roach 7/16/00

Section 2 - Characteristics							
Ignitability (Check only one.)		Corrosivity (Check only one.)		Reactivity (Check as many as apply.)		Boiling Point (Check only one.)	
(°F)	(°C)	(pH)				(°F)	(°C)
<input type="checkbox"/> < 73	< 22.8	<input checked="" type="checkbox"/> ≤ 2.0	pH = 1	<input type="checkbox"/> RCRA Unstable	<input type="checkbox"/> ≤ 95	≤ 35	
<input type="checkbox"/> 73 - 99	22.8 - 37.2	<input checked="" type="checkbox"/> 2.1 - 4.0		<input type="checkbox"/> Water Reactive	<input checked="" type="checkbox"/> > 95	> 35	
<input type="checkbox"/> 100 - 139	37.8 - 59.4	<input type="checkbox"/> 4.1 - 6.0		<input type="checkbox"/> Cyanide Bearing (> 250 ppm)			
<input type="checkbox"/> 140 - 200	60.0 - 99.3	<input type="checkbox"/> 6.1 - 9.0		<input type="checkbox"/> Sulfide Bearing (> 500 ppm)			
<input type="checkbox"/> > 200	> 99.3	<input type="checkbox"/> 9.1 - 12.4		<input type="checkbox"/> Pyrophoric			
<input type="checkbox"/> EPA Ignitable - Non-liquid		<input type="checkbox"/> ≥ 12.5	<input type="checkbox"/> Shock Sensitive				
<input type="checkbox"/> DOT Flammable Gas		<input type="checkbox"/> Liquid corrosive to steel	<input type="checkbox"/> Explosive - DOT Div. _____				
<input type="checkbox"/> DOT Oxidizer		<input type="checkbox"/> Non-aqueous	<input checked="" type="checkbox"/> Non-reactive		<input type="checkbox"/> Not applicable		
<input checked="" type="checkbox"/> Not ignitable							

Identify for all contaminants listed.	Characterization Method			Concentration of Contaminants			
	AK	TCLP	Total	None or Non-detect	Present Below Regulatory Limit	Above Regulatory Limit	
						Minimum	Maximum
Toxicity Characteristic Metals						(Concentration in ppm only.)	
Arsenic	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 5.0 ppm	_____ to _____	ppm
Barium	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 100.0 ppm	_____ to _____	ppm
Cadmium	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 1.0 ppm	_____ to _____	ppm
Chromium (Total)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 ppm	_____ to _____	ppm
Lead	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 ppm	_____ to _____	ppm
Mercury	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.2 ppm	_____ to _____	ppm
Selenium	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 1.0 ppm	_____ to _____	ppm
Silver	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 ppm	_____ to _____	ppm
Toxicity Characteristic Organics							
Benzene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____ to _____	ppm
Carbon tetrachloride	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____ to _____	ppm
Chlordane	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.03 ppm	_____ to _____	ppm
Chlorobenzene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 100.0 ppm	_____ to _____	ppm
Chloroform	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 6.0 ppm	_____ to _____	ppm
o - cresol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____ to _____	ppm
m - cresol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____ to _____	ppm
p - cresol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____ to _____	ppm
Cresol - mixed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____ to _____	ppm
2,4-D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 10.0 ppm	_____ to _____	ppm
1,4-Dichlorobenzene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 7.5 ppm	_____ to _____	ppm
1,2-Dichloroethane	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____ to _____	ppm
1,1-Dichloroethylene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.7 ppm	_____ to _____	ppm
2,4-Dinitrotoluene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.13 ppm	_____ to _____	ppm
Endrin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.02 ppm	_____ to _____	ppm
Heptachlor (& its epoxide)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.008 ppm	_____ to _____	ppm
Hexachlorobenzene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.13 ppm	_____ to _____	ppm
Hexachlorobutadiene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____ to _____	ppm
Hexachloroethane	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 3.0 ppm	_____ to _____	ppm
Lindane	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.4 ppm	_____ to _____	ppm
Methoxychlor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 10.0 ppm	_____ to _____	ppm
Methyl ethyl ketone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____ to _____	ppm
Nitrobenzene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 2.0 ppm	_____ to _____	ppm
Pentachlorophenol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 100.0 ppm	_____ to _____	ppm
Pyridine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 ppm	_____ to _____	ppm
Tetrachloroethylene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.7 ppm	_____ to _____	ppm
Toxaphene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____ to _____	ppm
Trichloroethylene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____ to _____	ppm
2,4,5-Trichlorophenol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 400.0 ppm	_____ to _____	ppm
2,4,6-Trichlorophenol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 2.0 ppm	_____ to _____	ppm
2,4,5-TP (Silvex)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 1.0 ppm	_____ to _____	ppm
Vinyl chloride	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.2 ppm	_____ to _____	ppm

LOS ALAMOS National Laboratory

WASTE PROFILE FORM

Section 5 - Additional Constituents

Additional Constituents and Contaminants. These account for 100% of waste. Ranges should be given within guidelines of LEO 404-10-83 of individual constituents. List all other constituents (including leach) not identified above and search any applicable analysis. No chemical formulae allowed in this field. Continue in Section 5 Additional Information as necessary. CAS Numbers are needed for all chemical constituents, for unusual without a CAS Number enter "No CAS Number." Contact Waste Services at 5-4000 for assistance.

CAS No.	Name of constituent	Minimum	Maximum
	<u>HNO₃</u>	<u>0.5</u>	<u>1</u> %
	<u>WATER</u>	<u>49</u>	<u>99.5</u> %
	<u>2,3,4,5 Tetrafluorobenzoic Acid</u>	<u>0.0000001</u>	<u>0.01</u> %
	<u>2,4 difluorobenzoic Acid</u>	<u>0.0000001</u>	<u>0.01</u> %
	<u>2,4,5 trifluorobenzoic Acid</u>	<u>0.0000001</u>	<u>0.01</u> %
	<u>2,6 difluorobenzoic Acid</u>	<u>0.0000001</u>	<u>0.01</u> %
<u>SR7/24/00</u>	<u>Calcium Hydroxide</u>	<u>0.0000001</u>	<u>0.001</u> %
	<u>Cerium III Chloride Heptahydrate</u>	<u>0.0000001</u>	<u>0.005</u> %
	<u>Cobalt (II) Chloride Heptahydrate</u>	<u>0.0000001</u>	<u>0.001</u> %
	<u>Lithium Bromide</u>	<u>0.0000001</u>	<u>0.1</u> %
	<u>Manganese Chloride</u>	<u>0.0000001</u>	<u>0.001</u> %
	<u>Nickel Chloride</u>	<u>0.0000001</u>	<u>0.001</u> %
<u>See Attached Sheet</u>		<u>Total of max. ranges of this section</u>	
		<u>100.83</u> <u>100.5</u> in %	
		<u>SR7/24/00</u> in ppm	

Additional Information (Use additional sheet if necessary.)

If additional information is available on the chemical, physical, or radiological character of the waste not covered on this form, provide it below:

pH of 10% nitric solution was measured with Whatman pH indicator strips 0-14 pH scale. pH = 1.0

A.M. Proach
7/10/00

~~Waste Profile Form # 32527 is attached and lists constituents that may be extracted from the SR rock and filter pad samples during processing and thus be contained in the 10% nitric acid solution. All constituents with an "*" asterisk by it are constituents that may be in the 10% nitric solution. Their min. and max. percents are stated in the WPF. The hazards associated with both the nitric acid and the constituents will not change due to their contact. This WPF and WPF 32527 will still account for disposal characteristics/hazards.~~

~~A.M. Proach 7/10/00~~

in fo. included in section 3R 7/24/00

WASTE GENERATOR CERTIFICATION: Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Signature: A.M. Proach Date: 7/10/00

WASTE MANAGEMENT COORDINATOR: I have reviewed this form and to the best of my knowledge, the information is complete and accurate.

Signature: Robyn Petersen Date: 7-14-00

Section 3 - Additional Constituents Continued

	<u>min</u>	<u>max</u>	
Pentafluoro benzoic Acid	0.0000001		
Potassium Iodide	0.0000001	0.1	
PYRIDONE	0.0000001	0.01	
Rhodamine WT	0.0000001	0.001	
Samarium III Chloride hexahydrate	0.0000001	0.005	
Sodium Hydroxide	0.0000001	0.001	
Sodium Iodide	0.0000001	0.01	SR 7/24/00
Uranine (Sodium Fluorescein)	0.0000001	0.05	
Polystyrene Latex Microspheres	0.0000001	0.01	
Sodium Fluoride	0.0000001	0.01	SR 7/24/00

7/25/00

TO: Andy Elicio
7-0735 FAX

FROM: Robyn Petersen

WPF 32733

Additional constituents added. Second
WPF attachment removed.

Call with questions. 5-9054

WASTE PROFILE FORM

Attachment 2 - Wastewater Characteristics for RLWTF (TA-50 & TA-21)

For help in completing this section, call 7-4301.

Indicate if waste was: Accelerator produced Reactor produced Other (Describe in WPF Section 1 "Waste/Process Description.")

Radionuclide Contaminants NONE

Identify for the following:	Present At Or Below LOC (in Ci/l)	Range if above LOC in Ci/l Min. / Max.	Identify for the following:	Present At Or Below LOC (in Ci/l)	Range if above LOC in Ci/l Min. / Max.
As-74	<input type="checkbox"/> ≤ 4.0 E-8	_____ / _____	Rb-84	<input type="checkbox"/> ≤ 1.0 E-8	_____ / _____
Be-7	<input type="checkbox"/> ≤ 1.0 E-6	_____ / _____	Sc-46	<input type="checkbox"/> ≤ 2.0 E-8	_____ / _____
Ce-141	<input type="checkbox"/> ≤ 5.0 E-8	_____ / _____	Sc-48	<input type="checkbox"/> ≤ 2.0 E-8	_____ / _____
Cs-134	<input type="checkbox"/> ≤ 2.0 E-9	_____ / _____	Se-75	<input type="checkbox"/> ≤ 2.0 E-8	_____ / _____
Cs-137	<input type="checkbox"/> ≤ 3.0 E-9	_____ / _____	Na-22	<input type="checkbox"/> ≤ 1.0 E-8	_____ / _____
Co-56	<input type="checkbox"/> ≤ 1.0 E-8	_____ / _____	Sr-85	<input type="checkbox"/> ≤ 7.0 E-8	_____ / _____
Co-57	<input type="checkbox"/> ≤ 1.0 E-7	_____ / _____	Sr-89	<input type="checkbox"/> ≤ 2.0 E-8	_____ / _____
Co-58	<input type="checkbox"/> ≤ 4.0 E-8	_____ / _____	Sr-90	<input type="checkbox"/> ≤ 1.0 E-9	_____ / _____
Co-60	<input type="checkbox"/> ≤ 5.0 E-9	_____ / _____	Sn-113	<input type="checkbox"/> ≤ 5.0 E-8	_____ / _____
Eu-152	<input type="checkbox"/> ≤ 2.0 E-8	_____ / _____	V-48	<input type="checkbox"/> ≤ 2.0 E-8	_____ / _____
H-3	<input type="checkbox"/> ≤ 2.0 E-8	_____ / _____	Y-88	<input type="checkbox"/> ≤ 3.0 E-8	_____ / _____
I-133	<input type="checkbox"/> ≤ 1.0 E-8	_____ / _____	Zn-65	<input type="checkbox"/> ≤ 9.0 E-9	_____ / _____
Mn-52	<input type="checkbox"/> ≤ 2.0 E-8	_____ / _____	Am-241	<input type="checkbox"/> ≤ 0.1 E-6	_____ / _____
Mn-54	<input type="checkbox"/> ≤ 5.0 E-8	_____ / _____	Pu-238	<input type="checkbox"/> ≤ 0.1 E-6	_____ / _____
Ra-226 + 228	<input type="checkbox"/> ≤ 3.0 E-11	_____ / _____	Pu-239	<input type="checkbox"/> ≤ 0.1 E-6	_____ / _____
Rb-83	<input type="checkbox"/> ≤ 2.0 E-8	_____ / _____	U-234	<input type="checkbox"/> ≤ 5.0 E-8	_____ / _____
Others:		_____ / _____	Others:		_____ / _____
		_____ / _____			_____ / _____
		_____ / _____			_____ / _____

Other Contaminants NONE

Metal Contaminants	Present Below LOC (in ppm)	Range if above LOC (in ppm) Min. / Max.	Additional Contaminants	Min. / Max.
Aluminum	<input type="checkbox"/> ≤ 5.0	_____ to _____ ppm	Chemical Oxygen Demand (COD)	_____ to _____ mg/l
Boron	<input type="checkbox"/> ≤ 5.0	_____ to _____ ppm	Total Suspended Solids (TSS)	_____ to _____ mg/l
Cobalt	<input type="checkbox"/> ≤ 1.0	_____ to _____ ppm	<input type="checkbox"/> Total Nitrogen or (only one entry needed)	_____ to _____ mg/l
Copper	<input type="checkbox"/> ≤ 1.0	_____ to _____ ppm	<input checked="" type="checkbox"/> Total Nitrates	10,000 to 10,000 mg/l
Vanadium	<input type="checkbox"/> ≤ 0.10	_____ to _____ ppm		
Zinc	<input type="checkbox"/> ≤ 95.40	_____ to _____ ppm		

Radioactive Contaminant Totals: NONE

Total Alpha	_____ Ci/l
Total Beta	_____ Ci/l
Total Gamma	_____ Ci/l

For TA-55 use only.
Wastewater will be discharged through one of the following:

Acid Line Caustic Line Industrial Waste Line

Yes No Scintillation Cocktail Brand Name _____ Volume _____ Unit _____

Yes No Chemical Treatment for Boilers / Water Chillers

Yes No Industrial Cleaner Type _____ Volume _____ Unit _____

Average daily volume when discharge occurs: JR 7/10/54 2.00 Gallons/day Liters/day

Maximum daily volume when discharge occurs: 4.00 Gallons/day Liters/day

Estimated number of days per year discharge will occur: 100

Estimated total volume per year discharged to the Radioactive Liquid Waste Collection System at TA-50 / TA-21: 400 Gallons Liters

Associated WPF Reference Number:**LDR and Underlying Hazardous Constituents Information - Identify presence of any constituents listed below.****Non-Wastewater / Wastewater Category - Check only one.** Non Wastewater Wastewater [as defined by 40 CFR 268.2(f)]**Notification of California List Applicability - Check all that apply.** Liquid hazardous waste containing PCBs at a concentration of 50 ppm or greater. A D001 thru D043 liquid waste containing 134 mg/L or greater of Nickel and/or 130 mg/L or greater of thallium. A D001 thru D043 waste containing Halogenated Organic Compounds (HOCs) listed in 40 CFR 268, Appendix III, at 1000 ppm or greater.**Notification Of Underlying Hazardous Constituents**

(Check the applicable underlying constituents above the concentration levels for D001 - D043 characteristic wastes only)

 No Underlying Hazardous Constituents in this waste stream. HAZCAT Meeting 40 CFR 268.42(c)**Organic Constituents**

- | | | |
|--|--|---|
| <input type="checkbox"/> A2213 | <input type="checkbox"/> Butyl benzyl phthalate | <input type="checkbox"/> p,p'-DDE |
| <input type="checkbox"/> Acenaphthylene | <input type="checkbox"/> 2-sec-Butyl-4,6-dinitrophenol (Dinoseb) | <input type="checkbox"/> o,p'-DDT |
| <input type="checkbox"/> Acenaphthene | <input type="checkbox"/> Carbaryl | <input type="checkbox"/> p,p'-DDT |
| <input type="checkbox"/> Acetone | <input type="checkbox"/> Carbenzadim | <input type="checkbox"/> Dibenz(a,h)anthracene |
| <input type="checkbox"/> Acetonitrile | <input type="checkbox"/> Carbofuran | <input type="checkbox"/> Dibenz(a,e)pyrene |
| <input type="checkbox"/> Acetophenone | <input type="checkbox"/> Carbofuran phenol | <input type="checkbox"/> 1,2-Dibromo-3-chloropropane |
| <input type="checkbox"/> 2-Acetyaminofluorene | <input type="checkbox"/> Carbon disulfide | <input type="checkbox"/> 1,2-Dibromoethane (Ethylene dibromide) |
| <input type="checkbox"/> Acrolein | <input type="checkbox"/> Carbon tetrachloride | <input type="checkbox"/> Dibromomethane |
| <input type="checkbox"/> Acrylamide | <input type="checkbox"/> Carbosulfan | <input type="checkbox"/> m-Dichlorobenzene |
| <input type="checkbox"/> Acrylonitrile | <input type="checkbox"/> Chlordane (alpha & gamma isomers) | <input type="checkbox"/> o-Dichlorobenzene |
| <input type="checkbox"/> Aldicarb sulfone | <input type="checkbox"/> p-Chloroaniline | <input type="checkbox"/> p-Dichlorobenzene |
| <input type="checkbox"/> Aldrin | <input type="checkbox"/> Chlorobenzene | <input type="checkbox"/> Dichlorodifluoromethane |
| <input type="checkbox"/> 4-Aminobiphenyl | <input type="checkbox"/> Chlorobenzilate | <input type="checkbox"/> 1,1-Dichloroethane |
| <input type="checkbox"/> Aniline | <input type="checkbox"/> 2-Chloro-1,3-butadiene | <input type="checkbox"/> 1,2-Dichloroethane |
| <input type="checkbox"/> Anthracene | <input type="checkbox"/> Chlorodibromomethane | <input type="checkbox"/> 1,1-Dichloroethylene |
| <input type="checkbox"/> Aramite | <input type="checkbox"/> Chloroethane | <input type="checkbox"/> trans-1,2-Dichloroethylene |
| <input type="checkbox"/> alpha-BHC | <input type="checkbox"/> bis(2-Chloroethoxy) methane | <input type="checkbox"/> 2,4-Dichlorophenol |
| <input type="checkbox"/> beta-BHC | <input type="checkbox"/> bis(2-Chloroethyl) ether | <input type="checkbox"/> 2,6-Dichlorophenol |
| <input type="checkbox"/> delta-BHC | <input type="checkbox"/> Chloroform | <input type="checkbox"/> 2,4-Dichlorophenoxyacetic acid (2,4-D) |
| <input type="checkbox"/> gamma-BHC | <input type="checkbox"/> bis(2-Chloroisopropyl) ether | <input type="checkbox"/> 1,2-Dichloropropane |
| <input type="checkbox"/> Barban | <input type="checkbox"/> p-Chloro-m-cresol | <input type="checkbox"/> cis-1,3-Dichloropropylene |
| <input type="checkbox"/> Bendiocarb | <input type="checkbox"/> 2-Chloroethyl vinyl ether | <input type="checkbox"/> trans-1,3-Dichloropropylene |
| <input type="checkbox"/> Bendiocarb phenol | <input type="checkbox"/> Chloromethane (Methyl chloride) | <input type="checkbox"/> Dieldrin |
| <input type="checkbox"/> Benomyl | <input type="checkbox"/> 2-Chloronaphthalene | <input type="checkbox"/> Diethylene glycol dicarbamate |
| <input type="checkbox"/> Benzene | <input type="checkbox"/> 2-Chlorophenol | <input type="checkbox"/> Diethyl phthalate |
| <input type="checkbox"/> Benz(a)anthracene | <input type="checkbox"/> 1-Chloropropylene | <input type="checkbox"/> p-Dimethylaminoazobenzene |
| <input type="checkbox"/> Benzal chloride | <input type="checkbox"/> Chrysene | <input type="checkbox"/> 2,4-Dimethyl phenol |
| <input type="checkbox"/> Benzo(b)fluoranthene | <input type="checkbox"/> o-Cresol | <input type="checkbox"/> Dimethyl phthalate |
| <input type="checkbox"/> Benzo(k)fluoranthene | <input type="checkbox"/> m-Cresol | <input type="checkbox"/> Dimetilan |
| <input type="checkbox"/> Benzo(g,h,i)perylene | <input type="checkbox"/> p-Cresol | <input type="checkbox"/> Di-n-butyl phthalate |
| <input type="checkbox"/> Benzo(a)pyrene | <input type="checkbox"/> m-Cumenyl methylcarbamate | <input type="checkbox"/> 1,4-Dinitrobenzene |
| <input type="checkbox"/> Bromodichloromethane | <input type="checkbox"/> Cycloate | <input type="checkbox"/> 4,6-Dinitro-o-cresol |
| <input type="checkbox"/> Bromomethane (Methyl bromide) | <input type="checkbox"/> Cyclohexanone | <input type="checkbox"/> 2,4-Dinitrophenol |
| <input type="checkbox"/> 4-Bromophenyl phenyl ether | <input type="checkbox"/> o,p'-DDD | <input type="checkbox"/> 2,4-Dinitrotoluene |
| <input type="checkbox"/> n-Butyl alcohol | <input type="checkbox"/> p,p'-DDD | <input type="checkbox"/> 2,6-Dinitrotoluene |
| <input type="checkbox"/> Butylate | <input type="checkbox"/> o,p'-DDE | <input type="checkbox"/> Di-n-octyl phthalate |

Notification Of Underlying Hazardous Constituents

(Check the applicable underlying constituents above the concentration levels for D001 - D043 characteristic wastes only)

Organic Constituents - continued

- | | | |
|---|--|--|
| <input type="checkbox"/> Di-n-propylnitrosamine | <input type="checkbox"/> Methapyrilene | <input type="checkbox"/> Phorate |
| <input type="checkbox"/> 1,4-Dioxane | <input type="checkbox"/> Methiocarb | <input type="checkbox"/> Phthalic acid |
| <input type="checkbox"/> Diphenylamine | <input type="checkbox"/> Methomyl | <input type="checkbox"/> Phthalic anhydride |
| <input type="checkbox"/> Diphenylnitrosamine | <input type="checkbox"/> Methoxychlor | <input type="checkbox"/> Physostigmine |
| <input type="checkbox"/> 1,2-Diphenylhydrazine | <input type="checkbox"/> 3-Methylcholanthrene | <input type="checkbox"/> Physostigmine salicylate |
| <input type="checkbox"/> Disulfoton | <input type="checkbox"/> 4,4-Methylene bis(2-chloroaniline) | <input type="checkbox"/> Promecarb |
| <input type="checkbox"/> Dithiocarbamates (total) | <input type="checkbox"/> Methylene chloride | <input type="checkbox"/> Pronamide |
| <input type="checkbox"/> Endosulfan I | <input type="checkbox"/> Methyl ethyl ketone | <input type="checkbox"/> Propham |
| <input type="checkbox"/> Endosulfan II | <input type="checkbox"/> Methyl isobutyl ketone | <input type="checkbox"/> Propoxur |
| <input type="checkbox"/> Endosulfan sulfate | <input type="checkbox"/> Methyl methacrylate | <input type="checkbox"/> Prosulfocarb |
| <input type="checkbox"/> Endrin | <input type="checkbox"/> Methyl methansulfonate | <input type="checkbox"/> Pyrene |
| <input type="checkbox"/> Endrin aldehyde | <input type="checkbox"/> Methyl parathion | <input type="checkbox"/> Pyridine |
| <input type="checkbox"/> EPTC | <input type="checkbox"/> Metolcarb | <input type="checkbox"/> Safrole |
| <input type="checkbox"/> Ethyl acetate | <input type="checkbox"/> Mexacarbate | <input type="checkbox"/> Silvex (2,4,5-TP) |
| <input type="checkbox"/> Ethyl benzene | <input type="checkbox"/> Molinate | <input type="checkbox"/> 1,2,4,5-Tetrachlorobenzene |
| <input type="checkbox"/> Ethyl cyanide (Propanenitrile) | <input type="checkbox"/> Naphthalene | <input type="checkbox"/> Tetrachlorodibenzo-p-dioxins (TCDDs) |
| <input type="checkbox"/> Ethyl ether | <input type="checkbox"/> 2-Naphthylamine | <input type="checkbox"/> Tetrachlorodibenzofurans (TCDFs) |
| <input type="checkbox"/> bis(2-Ethylhexyl) phthalate | <input type="checkbox"/> o-Nitroaniline | <input type="checkbox"/> 1,1,1,2-Tetrachloroethane |
| <input type="checkbox"/> Ethyl methacrylate | <input type="checkbox"/> p-Nitroaniline | <input type="checkbox"/> 1,1,2,2-Tetrachloroethane |
| <input type="checkbox"/> Ethylene oxide | <input type="checkbox"/> Nitrobenzene | <input type="checkbox"/> Tetrachloroethylene |
| <input type="checkbox"/> Famphur | <input type="checkbox"/> 5-Nitro-o-toluidine | <input type="checkbox"/> 2,3,4,6-Tetrachlorophenol |
| <input type="checkbox"/> Fluoranthene | <input type="checkbox"/> o-Nitrophenol | <input type="checkbox"/> Thiodicarb |
| <input type="checkbox"/> Fluorene | <input type="checkbox"/> p-Nitrophenol | <input type="checkbox"/> Thiophanate-methyl |
| <input type="checkbox"/> Formetanate hydrochloride | <input type="checkbox"/> N-Nitrosodiethylamine | <input type="checkbox"/> Tirpate |
| <input type="checkbox"/> Formparanate | <input type="checkbox"/> N-Nitrosodimethylamine | <input type="checkbox"/> Toluene |
| <input type="checkbox"/> Heptachlor | <input type="checkbox"/> N-Nitroso-di-n-butylamine | <input type="checkbox"/> Toxaphene |
| <input type="checkbox"/> Heptachlor epoxide | <input type="checkbox"/> N-Nitrosomethylethylamine | <input type="checkbox"/> Triallate |
| <input type="checkbox"/> Hexachlorobenzene | <input type="checkbox"/> N-Nitrosomorpholine | <input type="checkbox"/> Tribromomethane (Bromoform) |
| <input type="checkbox"/> Hexachlorobutadiene | <input type="checkbox"/> N-Nitrosopiperidine | <input type="checkbox"/> 1,2,4-Trichlorobenzene |
| <input type="checkbox"/> Hexachlorocyclopentadiene | <input type="checkbox"/> N-Nitrosopyrrolidine | <input type="checkbox"/> 1,1,1-Trichloroethane |
| <input type="checkbox"/> Hexachlorodibenzo-p-dioxins (HxCDDs) | <input type="checkbox"/> Oxamyl | <input type="checkbox"/> 1,1,2-Trichloroethane |
| <input type="checkbox"/> Hexachlorodibenzo-furans (HxCDFs) | <input type="checkbox"/> Parathion | <input type="checkbox"/> Trichloroethylene |
| <input type="checkbox"/> Hexachloroethane | <input type="checkbox"/> PCBs (total) | <input type="checkbox"/> Trichloromonofluoromethane |
| <input type="checkbox"/> Hexachloropropylene | <input type="checkbox"/> Pebulate | <input type="checkbox"/> 2,4,5-Trichlorophenol |
| <input type="checkbox"/> Indeno (1,2,3-c,d) pyrene | <input type="checkbox"/> Pentachlorobenzene | <input type="checkbox"/> 2,4,6-Trichlorophenol |
| <input type="checkbox"/> Iodomethane | <input type="checkbox"/> Pentachlorodibenzo-p-dioxins (PeCDDs) | <input type="checkbox"/> 2,4,5-Trichlorophenoxyacetic acid (2,4,5-T) |
| <input type="checkbox"/> 3-Iodo-2-propynyl n-butylcarbamate | <input type="checkbox"/> Pentachlorodibenzo-furans (PeCDFs) | <input type="checkbox"/> 1,2,3-Trichloropropane |
| <input type="checkbox"/> Isobutyl alcohol | <input type="checkbox"/> Pentachloroethane | <input type="checkbox"/> 1,1,2-Trichloro-1,2,2-trifluoroethane |
| <input type="checkbox"/> Isodrin | <input type="checkbox"/> Pentachloronitrobenzene | <input type="checkbox"/> Triethylamine |
| <input type="checkbox"/> Isolan | <input type="checkbox"/> Pentachlorophenol | <input type="checkbox"/> tris-(2,3-Dibromopropyl) phosphate |
| <input type="checkbox"/> Isosafrole | <input type="checkbox"/> Phenacetin | <input type="checkbox"/> Vermolate |
| <input type="checkbox"/> Kepone | <input type="checkbox"/> Phenanthrene | <input type="checkbox"/> Vinyl chloride |
| <input type="checkbox"/> Methacrylonitrile | <input type="checkbox"/> Phenol | <input type="checkbox"/> Xylenes (total) |
| <input type="checkbox"/> Methanol | <input type="checkbox"/> o-Phenylenediamine | |

Notification Of Underlying Hazardous Constituents

(Check the applicable underlying constituents above the concentration levels for D001 - D043 characteristic wastes only)

Metal/Inorganic Constituents

- | | | |
|---|--|-----------------------------------|
| <input type="checkbox"/> Antimony | <input type="checkbox"/> Cyanides (Amenable) | <input type="checkbox"/> Selenium |
| <input type="checkbox"/> Arsenic | <input type="checkbox"/> Fluoride | <input type="checkbox"/> Silver |
| <input type="checkbox"/> Barium | <input type="checkbox"/> Lead | <input type="checkbox"/> Sulfide |
| <input type="checkbox"/> Beryllium | <input type="checkbox"/> Mercury (Retort residues) | <input type="checkbox"/> Thallium |
| <input type="checkbox"/> Cadmium | <input type="checkbox"/> Mercury - All others | <input type="checkbox"/> Vanadium |
| <input type="checkbox"/> Chromium (Total) | <input type="checkbox"/> Nickel | <input type="checkbox"/> Zinc |
| <input type="checkbox"/> Cyanides (Total) | | |


[Back to Nitric Acid \(TraceMetal\)](#)

Material Safety Data Sheet

Nitric Acid

ACC# 16550

Section 1 - Chemical Product and Company Identification

MSDS Name: Nitric Acid

Catalog Numbers: S71972, S71972-1, S75623-2, S75623-3, S76523, A198C 212, A198C-212, A198C212, A198C4X 212, A198C4X212, A200 212, A200 500, A200 612GAL, A200-212, A200-500, A200-612G, A200-612GAL, A200-612GL, A200212, A200500, A200612GAL, A200C-2.5, A200C-212, A200C212EA, A200C4X 212, A200C4X212, A200C4X212 1, A200C4X2121, A200C4X2122, A200C4X212L, A200FP 500, A200FP500, A200J500, A200S 500, A200S-2.5, A200S-212, A200S-500, A200S4X212, A200S4X2123, A200S4X212L, A200S500, A200SI 212, A200SI-21, A200SI-212, A200SI212, A200SI21201, A200SI212LC, A206C 212, A206C-212, A206C212, A206C4X 212, A206C4X212, A467 500, A467-1, A467-2, A467-250, A467-500, A4672, A467500, A483 212, A483-212, A483212, A509 212, A509 212 002, A509 500, A509-212, A509-500, A509212, A509212 002, A509212001, A509212002, A509212003, A509212004, A5092122005, A509212LC, A509500, A509SK212, A510SK212, S71972-1MF*, S719721, S719721MF, S71972MF, S71972MF*, S71972SC

Synonyms: Azotic acid, engravers nitrate, hydrogen nitrate.**Company Identification:**

Fisher Scientific
1 Reagent Lane
Fairlawn, NJ 07410

For information, call: 201-796-7100**Emergency Number:** 201-796-7100**For CHEMTREC assistance, call:** 800-424-9300**For International CHEMTREC assistance, call:** 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Pptm	HSIN/ICS/PLINCS
7697-37-2	Nitric acid	68-70	231-714-2
7732-18-5	Water	29-31%	231-791-2

Hazard Symbols: O C**Risk Phrases:** 35 8

Section 5 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear to yellow. **Danger!** Strong oxidizer. Contact with other material may cause a fire. Corrosive. Causes eye and skin burns. Causes digestive and respiratory tract burns.

Target Organs: None.**Potential Health Effects**

Eye: Causes severe eye burns. May cause irreversible eye injury.

Skin: May cause severe skin irritation. Causes skin burns. May cause deep, penetrating ulcers of the skin.

Ingestion: Causes gastrointestinal tract burns. May cause perforation of the digestive tract.

Inhalation: May be fatal if inhaled. Effects may be delayed. May cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema.

Chronic: Repeated inhalation may cause chronic bronchitis. Repeated exposure may cause erosion of teeth.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid immediately. Do NOT allow victim to rub or keep eyes closed.

Skin: Get medical aid immediately. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Firefighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Strong oxidizer. Contact with combustible materials may cause a fire. Use water spray to keep fire-exposed containers cool. Substance is noncombustible.

Extinguishing Media: Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

Autoignition Temperature: Not available.

Flash Point: Not available.

NFPA Rating: Not published. Explosion Limits, Lower: Not available. Upper: Not available.

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material, (e.g., dry sand or earth), then place into a chemical waste container. Neutralize spill with sodium bicarbonate. A vapor suppressing foam may be used to reduce vapors.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8: Exposure Controls, Personal Protection

Engineering Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Chemical Name	NIOSH	NIOSH	OSHA PEL/PELs
Nitric acid	2 ppm ; 5.2 mg/m ³ ; 4 ppm STEL; 10 mg/m ³ STEL	2 ppm TWA; 5 mg/m ³ TWA 25 ppm IDLH	2 ppm TWA; 5 mg/m ³ TWA
Water	none listed	none listed	none listed

OSHA Vacated PELs: Nitric acid: 2 ppm TWA; 5 mg/m³ TWA Water: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves and clothing to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Section 9: Physical and Chemical Properties

Physical State: Liquid

Appearance: clear to yellow

Odor: strong odor - acrid odor

pH: 1.0

Vapor Pressure: 6.8 mm Hg

Vapor Density: Not available.

Evaporation Rate:

Viscosity: Not available.

Boiling Point: 186.8 deg F

Freezing/Melting Point:-43.6 deg F

Decomposition Temperature:Not available.

Solubility: Soluble in water.

Specific Gravity/Density:1.50

Molecular Formula:HNO₃

Molecular Weight:

Section 10: Stability and Reactivity

Chemical Stability: Decomposes when In contact with air, light, or organic matter.

Conditions to Avoid: High temperatures, incompatible materials, moisture, reducing agents.

Incompatibilities with Other Materials: Acids (organic, e.g. acetic acid, benzoic acid, formic acid, methanoic acid, oxalic acid), alcohols and glycols (e.g. butyl alcohol, ethanol, methanol, ethylene glycol), aldehydes (e.g. acetaldehyde, acrolein, chloral hydrate, formaldehyde), amides (e.g. butyramide, diethyltoluamide, dimethyl formamide), amines (aliphatic and aromatic, e.g. dimethyl amine, propylamine, pyridine, triethylamine), azo, diazo, and hydrazines (e.g. dimethyl

hydrazine, hydrazine, methyl hydrazine), carbamates (e.g. carbanolate, carbofuran), caustics (e.g. ammonia, ammonium hydrozide, calcium hydroxide, potassium hydroxide, sodium hydroxide), cyanides (e.g. potassium cyanide, sodium cyanide), dithiocarbamates (e.g. ferbam, maneb, metham, thiram), esters (e.g. butyl acetate, ethyl acetate, propyl formate), ethers (e.g. dioxane, furfuran, tetrahydrofuran (THF)), fluorides (inorganic, e.g. ammonium fluoride, calcium fluoride, cesium fluoride), hydrocarbons (aromatic, e.g. benzene, chrysene, cumene, toluene), halogenated organics (e.g. dibromoethane, hexachlorobenzene, methyl chloride, trichloroethylene), isocyanates (e.g. methyl isocyanate), ketones (e.g. acetone, acetophenone, MEK, MIBK), mercaptans and other organic sulfides (e.g. butyl mercaptan, carbon disulfide, methanethiol), metals (alkali and alkaline, e.g. cesium, potassium, sodium), metals as powders (e.g. hafnium, raney nickel), metals as non-powders (e.g. brass, bronze, iron), metals and metal compounds (toxic, e.g. beryllium, lead acetate, nickel carbonyl, tetraethyl lead), nitrides (e.g. potassium nitride, sodium nitride), nitriles (e.g. acetonitrile, methyl cyanide), nitro compounds (organic, e.g. nitrobenzene, nitroglycerine, picric acid, trinitrotoluene), hydrocarbons (aliphatic, unsaturated, e.g. cyclopentene, ethylene, heptene), hydrocarbons (aliphatic, saturated, e.g. butane, heptane, isooctane), peroxides and hydroperoxides (organic, e.g. acetyl peroxide, benzoyl peroxide, butyl peroxide, methyl ethyl ketone peroxide), ph.

Hazardous Decomposition Products: Nitrogen oxides.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 7697-37-2: QU5775000 QU5900000

CAS# 7732-18-5: ZC0110000

LD50/LC50:

CAS# 7697-37-2:

Inhalation, rat: LC50 = 67 ppm(NO2)/4H;

CAS# 7732-18-5:

Oral, rat: LD50 = >90 mL/kg;

Carcinogenicity:

CAS# 7697-37-2: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA. **CAS# 7732-18-5:** Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Epidemiology: No information available.

Teratogenicity: Effects on newborn: biochemical and metabolic, Oral-rat TDLo=2345 mg/kg (female 18D post). Fetotoxicity: Stunted fetus, Oral-rat TDLo=21150 mg/kg (female 1-21D post).

Reproductive Effects: No information available.

Neurotoxicity: No information available.

Mutagenicity: No information available.

Other Studies: None.

Section 12 - Ecotoxicological Information

Ecotoxicity: Mosquito fish: TLm=72 ppm/96H (fresh water) Cockle: LC50=330-1000 ppm/48H (salt water)

Environmental Fate: No information reported.

Physical/Chemical: No information available.

Other: None.

Section 13 - Disposal and Precautions

Dispose of in a manner consistent with federal, state, and local regulations.

RCRA D-Series Maximum Concentration of Contaminants: None listed.

RCRA D-Series Chronic Toxicity Reference Levels: None listed.

RCRA F-Series: None listed.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Hazardous Material Information

	HAZARDOUS MATERIAL	HAZARDOUS WASTE	HAZARDOUS SOLID	HAZARDOUS LIQUID	HAZARDOUS GAS
Shipping Name:	NITRIC ACID	No information available.	No information available.	No information available.	NITRIC ACID
Hazard Class:	8				8(9.2)
UN Number:	UN2031				UN2031
Packing Group:	II				II

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 7697-37-2 is listed on the TSCA inventory.

CAS# 7732-18-5 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

SARA

Section 302 (RQ)

CAS# 7697-37-2: final RQ = 1000 pounds (454 kg)

Section 302 (TPQ)

CAS# 7697-37-2: TPQ = 1000 pounds; RQ = 1000 pounds

SARA Codes

CAS # 7697-37-2: acute, chronic, flammable.

Section 313

This material contains Nitric acid (CAS# 7697-37-2, 68 70%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

CAS# 7697-37-2 is listed as a Hazardous Substance under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

CAS# 7697-37-2 is considered highly hazardous by OSHA.

STATE

CAS# 7697-37-2 can be found on the following state right to know lists: California, New Jersey,

WASTE PROFILE FORM

WPF #: 32733

(Version: 1.1)

30-Oct-2001 01:35 PM

Generator: ROACH, JEFFREY L EET
WMC: PETERSEN, ROBYN CST25
FROM: FWO-SWO

MS: J514
MS: J519
MS: J595/5-4000

WASTE PROFILE (WPF) EXTENSION QUESTIONNAIRE

Our files indicate that your WPF#: 32733 was submitted approximately one year ago. Please review the attached copy and answer the following questions concerning your waste stream to determine whether to renew or void your WPF. Please return the completed questionnaire to FWO-SWO at the address listed below. If your waste stream remains the same, your WPF will be extended for another year. If the original generator is no longer with the generating group or generating this waste, a new WPF will need to be filled out with a new generator. Upon receipt of this questionnaire with a signed Extension Certification, we will send you a return receipt indicating that your WPF is valid for another year. If there are changes in your waste stream, a new WPF will need to be completed.

Are you currently producing the same type of waste as indicated on your WPF#: 32733

YES NO

If yes, please sign the Extension Certification below

If no, will you be producing the same type of waste in the near future?

YES NO

If yes, please sign the Extension Certification below

If no, will you be producing a different type of waste?

YES NO

If no, sign the Void Approval below to indicate that your WPF should be voided

If yes, please submit a new WPF, along with this memo. We will then void your previous WPF and process a new one

Extension Certification

I am producing or will produce the same type of waste as indicated in WPF# 32733

Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Extension->

Signed

Jama Wolfberg

Date

11/13/01

Void Approval

I will no longer be generating or will be producing a different type or composition (a new WPF will be submitted) of waste as indicated in WPF# 32733

Void->

Signed

J. M. Roach

Date

11/13/01

NOTE: PLEASE FOLD AND STAPLE THE FORM TO THE LINE BELOW AND RETURN TO ADDRESS PROVIDED

TO: FWO-SWO

MS: J595

PHONE: 5-4000

Florida, Pennsylvania, Minnesota, Massachusetts.

CAS# 7732-18-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

O C

Risk Phrases:

R 35 Causes severe burns. R 8 Contact with combustible material may cause fire.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36 Wear suitable protective clothing. S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S23B Do not breathe fumes.

WGK (Water Danger/Protection)

CAS# 7697-37-2: 1

CAS# 7732-18-5: No information available.

Canada

CAS# 7697-37-2 is listed on Canada's DSL/NDSL List.

CAS# 7732-18-5 is listed on Canada's DSL/NDSL List.

This product has a WHMIS classification of C, D1A, E.

CAS# 7697-37-2 is not listed on Canada's Ingredient Disclosure List.

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 7697-37-2: OEL-ARAB Republic of Egypt:TWA 2 ppm (5 mg/m³) OEL-AUSTRALIA:TWA 2 ppm (5 mg/m³);STEL 4 ppm (10 mg/m³) OEL-BELGIUM:TWA 2 ppm (5.2 mg/m³);STEL 4 ppm (10 mg/m³) OEL-CZECHOSLOVAKIA:TWA 2.5 mg/m³;STEL 5 mg/m³ OEL-DENMARK:TWA 2 ppm (5 mg/m³) OEL-FINLAND:TWA 2 ppm (5 mg/m³);STEL 5 ppm (13 mg/m³);Skin OEL-FRANCE:TWA 2 ppm (5 mg/m³) ;STEL 4 ppm (10 mg/m³) OEL-GERMANY:TWA 10 ppm (25 mg/m³) OEL-HUNGARY :STEL 5 mg/m³ OEL-JAPAN:TWA 2 ppm (5.2 mg/m³) OEL-THE PHILIPPINES:TW A 2 ppm (5 mg/m³) OEL-POLAND:TWA 10 mg/m³ OEL-RUSSIA:TWA 2 ppm;STEL 2 mg/m³;Skin OEL-SWEDEN:TWA 2 ppm (5 mg/m³);STEL 5 ppm (13 mg/m³) OEL-SWITZERLAND:TWA 2 ppm (5 mg/m³);STEL 4 ppm (1 mg/m³) OEL-THAILAND:T WA 2 ppm (5 mg/m³) OEL-TURKEY:TWA 2 ppm (5 mg/m³) OEL-UNITED KINGDOM :TWA 2 ppm (5 mg/m³);STEL 4 ppm (10 mg/m³) OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

Section 16 - Additional Information

MSDS Creation Date: 12/20/1994

Revision #18 Date: 9/30/1998

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.

WPF #: 32733

(Version: 1)

19-Sep-2001 07:53 AM

Generator: ROACH, JEFFREY L EET
WMC: PETERSEN, ROBYN CST25
FROM: FWO-SWO

MS: J514
MS: J519
MS: J595/5-4000

WASTE PROFILE (WPF) EXTENSION QUESTIONNAIRE

Our files indicate that your WPF#: 32733 was submitted approximately one year ago. Please review the attached copy and answer the following questions concerning your waste stream to determine whether to renew or void your WPF. Please return the completed questionnaire to FWO-SWO at the address listed below. If your waste stream remains the same, your WPF will be extended for another year. If the original generator is no longer with the generating group or generating this waste, a new WPF will need to be filled out with a new generator. Upon receipt of this questionnaire with a signed Extension Certification, we will send you a return receipt indicating that your WPF is valid for another year. If there are changes in your waste stream, a new WPF will need to be completed.

Are you currently producing the same type of waste as indicated on your WPF#: 32733

YES NO

If yes, please sign the Extension Certification below

If no, will you be producing the same type of waste in the near future?

YES NO

If yes, please sign the Extension Certification below

If no, will you be producing a different type of waste?

YES NO

If no, sign the Void Approval below to indicate that your WPF should be voided

If yes, please submit a new WPF, along with this memo. We will then void your previous WPF and process a new one

Extension Certification

I am producing or will produce the same type of waste as indicated in WPF# 32733

Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Extension->

Signed

Laura Walesberg

Date

10-1-01

LAURA WALESBERG

Void Approval

I will no longer be generating or will be producing a different type or composition (a new WPF will be submitted) of waste as indicated in WPF# 32733

Void->

Signed

J. M. Roach

Date

10/1/01

NOTE: PLEASE FOLD AND STAPLE THE FORM TO THE LINE BELOW AND RETURN TO ADDRESS PROVIDED

TO: FWO-SWO

MS: J595

PHONE: 5-4000

LOS ALAMOS NATIONAL LABORATORY WASTE PROFILE SYSTEM

WPF #: 35269

31-Jan-2008 11:46 AM

(Version: 3)

p.1

Generator :	COSTA, DAVID	MS :	E530	PH :	58958	Z#:	121377
WMC :	MCCORMICK, EGAN	MS :	E507	PH :	5056678158	Z#:	093573
Contact :							
RCRA Rev :	ELICIO ANDY U	MS :	J599	PH :	5056676956	Z#:	118692
Status :	EXPIRE	Activation Date :	10/31/2002	Expiration Date:	10/31/2005		
Group :	NMT15	TA :	55	Bldg :	000004	Room :	106

You are required to keep a copy of the WPF(s) in your files for at least three years. This WPF(s) is valid for one year or as long as the composition of the waste you have characterized remains the same. Should your waste change, please submit a new WPF to Waste Acceptance Group.

Waste Accumu : None of the Above Site ID#
 Method of Char : Analysis/Documents Attached
 Chemical/Physical Analysis
 Radiological Analysis
 Acceptable Knowledge Documentation

Waste Type : Process Waste/Spent Chemical/Other
 Waste Classes: RCA Waste - RCA Waste
 RAD Waste - Radioactive-TRU
 WW Info - RLWTF
 Classif/Sensi - N

Waste Category: Inorganic

Waste Sources : Research/Development/Testing

Waste Matrix : Aqueous

Matrix Type : Homogeneous

Process Desc :
 WASTE AQUEOUS ELECTROCHEMICAL PROCESS SOLUTIONS WITH LOW LEVELS OF URANIUM CONTAMINATION AND LESS THAN 0.1MOL/L SODIUM SULFATE. GROUPS 1-4

Waste Desc : N/A

Ignitability : Not ignitable

Corrosivity : 9.1 - 12.4

Reactivity : Non-reactive

Boiling Point : > 95 F > 35 C

Toxicity Characteristic Metals:

Contaminant	Method	Limit	Min	Max	Unit
CHROMIUM	TOTA		0	6	PPM

Toxicity Characteristic Organic Compounds: N/A

Additional Chemical Constituents and Contaminants:

CAS NO	Constituent	MIN	MAX	UOM
7757-82-6	SODIUM SULFATE	0	1.5	%

**LOS ALAMOS NATIONAL LABORATORY
WASTE PROFILE SYSTEM**

WPF #: 35269

31-Jan-2008 11:46 AM

(Version: 3)

p.2

WATER	95	98.5	%
BERYLLIUM	0	0.00001	%

Additional Information: A SUMMARY OF RESULTS IS INCLUDED AS ATTACHMENT 3.

Waste Water Characteristics for RLWTF

Waste Production: Other

Radionuclide Contaminants :

Contaminant	Limit	Min	Max	Unit	Method
PU-239		0	0.0000349	Ci/l	
U-234		0	0.0000349	Ci/l	
U236		0	0.0000349	Ci/l	
U235 (93.5%)		0	0.0000349	Ci/l	
U238		0	0.0000349	Ci/l	

Metal Contaminants:

Contaminant	Limit	Min	Max	Unit	Method
VANADIUM		0	1.2	ppm	
ZINC	Y			ppm	

Total Alpha: 3.00E-06 Ci/l

Average daily flow when discharge occurs: 10 LIT

Maximum daily flow when discharge occurs: 30 LIT

Estimated number of days discharge will occur: 10

Estimated total volume per year discharged to the RLWC at TA-50: 300

LDR and Underlying Hazardous Constituents Information

Non-Wastewater/Wastewater Category: **Non Wastewater**

WASTE CHARACTERIZATION INFORMATION

Radioactivity Category : **RADIOACTIVE-TRU**

RCRA Category : **HAZARDOUS WASTE**

Secondary Info : **N/A**

Waste Classification : **MIXED TRANSURANIC WASTE**

Waste Acceptances : **TA-50 Acceptance**

EPA Hazardous Waste Code : **D007**

Notification Of Underlying Hazardous Constituents:

Constituents

Beryllium

Chromium (Total)

LOS ALAMOS NATIONAL LABORATORY
WASTE PROFILE SYSTEM

WPF #: 35269

31-Jan-2008 11:46 AM

(Version: 3)

p.3

GWCP Information

Section 1 - Waste Prevention/Minimization (answer all questions)

Can hazard segregation, elimination, or material substitution be used?

Yes* No

Can any of the materials in the waste stream be recycled or reused?

Yes* No

Has waste minimization been incorporated into procedures or other process controls?

Yes No

Can this waste be generated outside a RCA?

Yes* No N/A

*Provide Comment

Section 6 - Work Control Documentation (answer all questions)

Do the procedures for this process cover how to manage this waste?

Yes No (Provide comments)

Do the procedures for this process cover controls to prevent changes to waste constituents and concentrations or addition or removal of waste?

Yes No (Provide comments)

Section 7 - Package and Storage Control

Describe how the waste will be packaged in according to the applicable WAC:

Identify the storage management controls that will be used for this waste stream: (check all that apply)

- Tamper indication devices:
- Limited use locks with log-in for waste
- Locked cabinet or building
- Other (describe)

Section 8 - Waste Certification Statements (check only one)

- Waste appears to meet WAC chapter for:
- Waste needs exception/exemption for treatment, storage, or disposal at:
- Waste does not meet the criteria for any known TSDF, (DOE approval is required. Contact the Waste Management Program Office for assistance.)

Estimated Annual Volume (m3):

RECEIVED AUG 19 2002

ORIGINAL

LOS ALAMOS
National Laboratory

WASTE PROFILE FORM

Contact (if other than given below)		For rapid processing, complete all sections in black or blue ink and mail to: EM-SWO at MS J595. For assistance with completing this form, call EM-SWO at 5-4000.			Reference Number 35269 (For EM-SWO use only.)	
Generator's Z Number 121377	Waste Generator's Name (print) David Costa	WMC's Z Number 093573	WMC's Name (print) Egan McCormick			
Generator's Telephone 665-8958	Generator's Mail Stop E530	Waste Generating Group NMT-15	Waste Stream Technical Area TA-55	Building PF-4	Room 106	
Waste Accumulation (Check only one.)		<input type="checkbox"/> Satellite Accumulation Area <input type="checkbox"/> Less-than-90-days Storage Area <input type="checkbox"/> TSDF <input type="checkbox"/> Universal Waste Storage Area <input checked="" type="checkbox"/> None of the Above			Site no: _____ Site no: _____ Site no: _____ Site no: _____	
ER Use Only		<input type="checkbox"/> ER Site			PRS #: _____	
Method of Characterization (Check as many as apply.)		<input checked="" type="checkbox"/> Chemical/Physical Analysis <input checked="" type="checkbox"/> Radiological Analysis <input type="checkbox"/> PCB Analysis <input checked="" type="checkbox"/> Acceptable Knowledge Documentation <input type="checkbox"/> MSDS			Sample #: _____ Sample #: _____ Sample #: _____ Documentation #: _____	
<input type="checkbox"/> Analysis/Documents Attached						

Section 1 - Chemical and Physical Information

Waste Type (Check only one.)	Waste Category (Check as many as apply.)	Waste Source (Check only one.)	Waste Matrix (Check only one.)
<input type="checkbox"/> Unused/Unspent Chemical (Complete all sections as appropriate.) <input checked="" type="checkbox"/> Process Waste/Spent Chemical/ other (Complete all sections.) <input type="checkbox"/> Green is Clean Waste (Complete all sections as appropriate.)	<input checked="" type="checkbox"/> Inorganic <input type="checkbox"/> Organic Volatile Organics <input type="checkbox"/> < 500 ppm <input type="checkbox"/> ≥ 500 ppm <input type="checkbox"/> Solvent * <input type="checkbox"/> Degreaser * <input type="checkbox"/> Dioxin <input type="checkbox"/> Electroplating <input type="checkbox"/> Treated Hazardous waste residue <input type="checkbox"/> Explosive process <input type="checkbox"/> Infectious/Medical <input type="checkbox"/> Biological <input type="checkbox"/> Beryllium <input type="checkbox"/> Empty Container (See instructions) <input type="checkbox"/> Battery (See instructions) Asbestos <input type="checkbox"/> friable <input type="checkbox"/> non-friable PCB Source Concentration <input type="checkbox"/> PCB < 50 ppm <input type="checkbox"/> PCB ≥ 50 - < 500 ppm <input type="checkbox"/> PCB ≥ 500 ppm <input type="checkbox"/> Other (Describe below)	Routine Waste <input type="checkbox"/> Decon <input type="checkbox"/> Materials Processing/Production <input checked="" type="checkbox"/> Research/Development/Testing <input type="checkbox"/> Scheduled Maintenance <input type="checkbox"/> Housekeeping - Routine <input type="checkbox"/> Spill Cleanup - Routine <input type="checkbox"/> Sampling - Routine Monitoring <input type="checkbox"/> Other (Describe below) Non-routine Waste <input type="checkbox"/> Abatement <input type="checkbox"/> Construction/Upgrades <input type="checkbox"/> Demolition <input type="checkbox"/> Decon/Decom <input type="checkbox"/> Investigative Derived <input type="checkbox"/> Orphan/Legacy <input type="checkbox"/> Remediation/Restoration <input type="checkbox"/> Repacking (Secondary) <input type="checkbox"/> Unscheduled Maintenance <input type="checkbox"/> Housekeeping - Non-routine <input type="checkbox"/> Spill Cleanup - Non-routine <input type="checkbox"/> UST - Non-petroleum <input type="checkbox"/> UST - Petroleum <input type="checkbox"/> Other (Describe below)	Gas <input type="checkbox"/> ≤ 1.5 Atmospheres pressure <input type="checkbox"/> > 1.5 Atmospheres pressure <input type="checkbox"/> Liquefied compressed gas Liquid <input checked="" type="checkbox"/> Aqueous <input type="checkbox"/> Non-aqueous <input type="checkbox"/> Suspended Solids/ Aqueous <input type="checkbox"/> Suspended Solids/ Non-aqueous Solid <input type="checkbox"/> Powder/Ash <input type="checkbox"/> Solid <input type="checkbox"/> Sludge <input type="checkbox"/> Absorbed liquid
Waste Classes Radiological Information Was Waste Generated in a RCA? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Non-radioactive <input checked="" type="checkbox"/> Radioactive <input type="checkbox"/> Low-Level <input checked="" type="checkbox"/> Transuranic	* Concentrations 10% or greater before use.		Matrix Type (Check only one.) <input checked="" type="checkbox"/> Homogeneous <input type="checkbox"/> Heterogeneous (Describe below)
Wastewater Information <input type="checkbox"/> Wastewater for SWSC (TA-46) (Complete Attachment 1) <input checked="" type="checkbox"/> Wastewater for RLWTF (TA-50/TA-21) (Complete Attachment 2) <input type="checkbox"/> Wastewater for TA-16 (HE)			
Classification Information <input checked="" type="checkbox"/> Unclassified <input type="checkbox"/> Classified/Sensitive			

Waste/Process Description (Chemical formulas may be used in this field.)
 Waste aqueous electrochemical process solutions with low levels of uranium contamination and less than 0.1 mol/L sodium sulfate. Groups 1-4

WASTE PROFILE FORM

Section 2 - Characteristics

Ignitability (Check only one.)		Corrosivity (Check only one.)		Reactivity (Check as many as apply.)		Boiling Point (Check only one.)	
(°F)	(°C)	(pH)				(°F)	(°C)
<input type="checkbox"/> < 73	<input type="checkbox"/> < 22.8	<input type="checkbox"/> ≤ 2.0		<input type="checkbox"/> RCRA Unstable		<input type="checkbox"/> ≤ 95	<input type="checkbox"/> ≤ 35
<input type="checkbox"/> 73 - 99	<input type="checkbox"/> 22.8 - 37.2	<input type="checkbox"/> 2.1 - 4.0		<input type="checkbox"/> Water Reactive		<input checked="" type="checkbox"/> > 95	<input type="checkbox"/> > 35
<input type="checkbox"/> 100 - 139	<input type="checkbox"/> 37.8 - 59.4	<input type="checkbox"/> 4.1 - 6.0		<input type="checkbox"/> Cyanide Bearing (> 250 ppm)			
<input type="checkbox"/> 140 - 200	<input type="checkbox"/> 60.0 - 99.3	<input type="checkbox"/> 6.1 - 9.0		<input type="checkbox"/> Sulfide Bearing (> 500 ppm)			
<input type="checkbox"/> > 200	<input type="checkbox"/> > 99.3	<input checked="" type="checkbox"/> 9.1 - 12.4		<input type="checkbox"/> Pyrophoric			
<input type="checkbox"/> EPA Ignitable - Non-liquid		<input type="checkbox"/> ≥ 12.5		<input type="checkbox"/> Shock Sensitive			
<input type="checkbox"/> DOT Flammable Gas		<input type="checkbox"/> Liquid corrosive to steel		<input type="checkbox"/> Explosive - DOT Div. _____			
<input type="checkbox"/> DOT Oxidizer		<input type="checkbox"/> Non-aqueous		<input checked="" type="checkbox"/> Non-reactive			<input type="checkbox"/> Not applicable
<input checked="" type="checkbox"/> Not ignitable							

Identify for all contaminants listed.	Characterization Method			Concentration of Contaminants			
	AK	TCLP	Total	None or Non-detect	Present Below Regulatory Limit	Above Regulatory Limit	
						Minimum	Maximum
Toxicity Characteristic Metals						(Concentration in ppm only.)	
Arsenic	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 5.0 ppm	_____	to _____ ppm
Barium	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 100.0 ppm	_____	to _____ ppm
Cadmium	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 1.0 ppm	_____	to _____ ppm
Chromium (Total)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 ppm	0	to 6 ppm
Lead	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 5.0 ppm	_____	to _____ ppm
Mercury	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.2 ppm	_____	to _____ ppm
Selenium	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 1.0 ppm	_____	to _____ ppm
Silver	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 5.0 ppm	_____	to _____ ppm
Toxicity Characteristic Organics							
Benzene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____	to _____ ppm
Carbon tetrachloride	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____	to _____ ppm
Chlordane	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.03 ppm	_____	to _____ ppm
Chlorobenzene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 100.0 ppm	_____	to _____ ppm
Chloroform	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 6.0 ppm	_____	to _____ ppm
o - cresol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____	to _____ ppm
m - cresol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____	to _____ ppm
p - cresol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____	to _____ ppm
Cresol - mixed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____	to _____ ppm
2,4-D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 10.0 ppm	_____	to _____ ppm
1,4-Dichlorobenzene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 7.5 ppm	_____	to _____ ppm
1,2-Dichloroethane	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____	to _____ ppm
1,1-Dichloroethylene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.7 ppm	_____	to _____ ppm
2,4-Dinitrotoluene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.13 ppm	_____	to _____ ppm
Endrin	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.02 ppm	_____	to _____ ppm
Heptachlor (& its epoxide)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.008 ppm	_____	to _____ ppm
Hexachlorobenzene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.13 ppm	_____	to _____ ppm
Hexachlorobutadiene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____	to _____ ppm
Hexachloroethane	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 3.0 ppm	_____	to _____ ppm
Lindane	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.4 ppm	_____	to _____ ppm
Methoxychlor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 10.0 ppm	_____	to _____ ppm
Methyl ethyl ketone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____	to _____ ppm
Nitrobenzene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 2.0 ppm	_____	to _____ ppm
Pentachlorophenol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 100.0 ppm	_____	to _____ ppm
Pyridine	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 5.0 ppm	_____	to _____ ppm
Tetrachloroethylene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.7 ppm	_____	to _____ ppm
Toxaphene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____	to _____ ppm
Trichloroethylene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____	to _____ ppm
2,4,5-Trichlorophenol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 400.0 ppm	_____	to _____ ppm
2,4,6-Trichlorophenol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 2.0 ppm	_____	to _____ ppm
2,4,5-TP (Silvex)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 1.0 ppm	_____	to _____ ppm
Vinyl chloride	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.2 ppm	_____	to _____ ppm

WASTE PROFILE FORM

Attachment 1 - Wastewater Characteristics for SWSC (TA-46)

For help in completing this section, call ESH-18 at 7-4882. Identify presence of any constituents listed below.
Use of Acceptable Knowledge in lieu of analytical data must be pre-approved by ESH-18.

Microtox Analysis #: _____ NOTE: Microtox analysis must be performed. Contact JCI/ENV to schedule analysis.

Are there any detectable levels of gross Alpha, gross Beta, gross Gamma, and/or Tritium? No Yes

All methods of analysis must conform to those approved pursuant to 40 CFR 136 unless an alternative method has been approved by ESH-18.

All metal concentrations are for the dissolved fraction present in the sample unless otherwise indicated.

Flow Rate Parameters	<input type="checkbox"/> Flow Rate of 100 gallons/day or less			<input type="checkbox"/> Flow Rate of greater than 100 gallons/day		
	None/ Non-detect	Within Regulatory Limits	Above Limit	None/ Non-detect	Within Regulatory Limits	Above Limit
pH	<input type="checkbox"/>	<input type="checkbox"/> 5 -11 SU	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 5 -11 SU	<input type="checkbox"/>
Chemical Oxygen Demand (COD)	<input type="checkbox"/>	<input type="checkbox"/> ≤ 750 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ≤ 500 mg/l	<input type="checkbox"/>
Microtox results (a)	<input type="checkbox"/>	<input type="checkbox"/> < 55% screen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 50% screen	<input type="checkbox"/>
(b)	<input type="checkbox"/>	<input type="checkbox"/> > 20% EC50	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> > 25% EC50	<input type="checkbox"/>
Temperature	<input type="checkbox"/>	<input type="checkbox"/> ≤ 180 °F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ≤ 140 °F	<input type="checkbox"/>
Cyanide (Total)	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 1.0 mg/l	<input type="checkbox"/>
Fluoride	<input type="checkbox"/>	<input type="checkbox"/> < 200.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 50.0 mg/l	<input type="checkbox"/>
Iron	<input type="checkbox"/>	<input type="checkbox"/> < 100.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 35.0 mg/l	<input type="checkbox"/>
Magnesium	<input type="checkbox"/>	<input type="checkbox"/> < 100.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 50.0 mg/l	<input type="checkbox"/>
Manganese	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 1.0 mg/l	<input type="checkbox"/>
Metals (Total)	<input type="checkbox"/>	<input type="checkbox"/> < 40.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 10.0 mg/l	<input type="checkbox"/>
Nickel	<input type="checkbox"/>	<input type="checkbox"/> < 50.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ≤ 3.0 mg/l	<input type="checkbox"/>
Nitrogen (Total)	<input type="checkbox"/>	<input type="checkbox"/> ≤ 100.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ≤ 50.0 mg/l	<input type="checkbox"/>
Oil and Greases	<input type="checkbox"/>	<input type="checkbox"/> < 100.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 50.0 mg/l	<input type="checkbox"/>
Phosphorus (Total)	<input type="checkbox"/>	<input type="checkbox"/> < 100.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 50.0 mg/l	<input type="checkbox"/>
Silver	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 mg/l	<input type="checkbox"/>
Total Suspended Solids (TSS)	<input type="checkbox"/>	<input type="checkbox"/> ≤ 400.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ≤ 300.0 mg/l	<input type="checkbox"/>
Zinc	<input type="checkbox"/>	<input type="checkbox"/> < 25.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 mg/l	<input type="checkbox"/>

Wastewater contaminants Identify for all constituents listed	None/Non-detect	Present within Regulatory Limits	Above Limit
Dissolved Aluminum	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 mg/l	<input type="checkbox"/>
Dissolved Arsenic	<input type="checkbox"/>	<input type="checkbox"/> < 0.2 mg/l	<input type="checkbox"/>
Barium	<input type="checkbox"/>	<input type="checkbox"/> < 100.0 mg/l	<input type="checkbox"/>
Beryllium	<input type="checkbox"/>	<input type="checkbox"/> < 5.3 mg/l	<input type="checkbox"/>
Dissolved Boron	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 mg/l	<input type="checkbox"/>
Dissolved Cadmium	<input type="checkbox"/>	<input type="checkbox"/> < 0.05 mg/l	<input type="checkbox"/>
Chlorine (Total Residual)	<input type="checkbox"/>	<input type="checkbox"/> < 3.0 mg/l	<input type="checkbox"/>
Dissolved Chromium	<input type="checkbox"/>	<input type="checkbox"/> < 1.0 mg/l	<input type="checkbox"/>
Dissolved Cobalt	<input type="checkbox"/>	<input type="checkbox"/> < 1.0 mg/l	<input type="checkbox"/>
Dissolved Copper	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 mg/l	<input type="checkbox"/>
Dissolved Lead	<input type="checkbox"/>	<input type="checkbox"/> < 0.1 mg/l	<input type="checkbox"/>
Total Mercury	<input type="checkbox"/>	<input type="checkbox"/> < 0.01 mg/l	<input type="checkbox"/>
Molybdenum	<input type="checkbox"/>	<input type="checkbox"/> < 75.0 mg/l	<input type="checkbox"/>
Polychlorinated Biphenyls (PCB)	<input type="checkbox"/>	None Detected	<input type="checkbox"/>
Dissolved Selenium	<input type="checkbox"/>	<input type="checkbox"/> < 0.05 mg/l	<input type="checkbox"/>
Dissolved Vanadium	<input type="checkbox"/>	<input type="checkbox"/> < 0.1 mg/l	<input type="checkbox"/>
Dissolved Zinc	<input type="checkbox"/>	<input type="checkbox"/> < 25.0 mg/l	<input type="checkbox"/>

WASTE PROFILE FORM

Attachment 2 - Wastewater Characteristics for RLWTF (TA-50 & TA-21)

For help in completing this section, call 7-4301.

Indicate if waste was: Accelerator produced Reactor produced Other (Describe in WPF Section 1 "Waste/Process Description.")

Radionuclide Contaminants

Identify for the following:	Present At Or Below LOC (in Ci/l)	Range if above LOC in Ci/l		Identify for the following:	Present At Or Below LOC (in Ci/l)	Range if above LOC in Ci/l	
		Min.	Max.			Min.	Max.
As-74	<input type="checkbox"/> ≤ 4.0 E -8	_____	/	Rb-84	<input type="checkbox"/> ≤ 1.0 E -8	_____	/
Be-7	<input type="checkbox"/> ≤ 1.0 E -6	_____	/	Sc-46	<input type="checkbox"/> ≤ 2.0 E -8	_____	/
Ce-141	<input type="checkbox"/> ≤ 5.0 E -8	_____	/	Sc-48	<input type="checkbox"/> ≤ 2.0 E -8	_____	/
Cs-134	<input type="checkbox"/> ≤ 2.0 E -9	_____	/	Se-75	<input type="checkbox"/> ≤ 2.0 E -8	_____	/
Cs-137	<input type="checkbox"/> ≤ 3.0 E -9	_____	/	Na-22	<input type="checkbox"/> ≤ 1.0 E -8	_____	/
Co-56	<input type="checkbox"/> ≤ 1.0 E -8	_____	/	Sr-85	<input type="checkbox"/> ≤ 7.0 E -8	_____	/
Co-57	<input type="checkbox"/> ≤ 1.0 E -7	_____	/	Sr-89	<input type="checkbox"/> ≤ 2.0 E -8	_____	/
Co-58	<input type="checkbox"/> ≤ 4.0 E -8	_____	/	Sr-90	<input type="checkbox"/> ≤ 1.0 E -9	_____	/
Co-60	<input type="checkbox"/> ≤ 5.0 E -9	_____	/	Sn-113	<input type="checkbox"/> ≤ 5.0 E -8	_____	/
Eu-152	<input type="checkbox"/> ≤ 2.0 E -8	_____	/	V-48	<input type="checkbox"/> ≤ 2.0 E -8	_____	/
H-3	<input type="checkbox"/> ≤ 2.0 E -8	_____	/	Y-88	<input type="checkbox"/> ≤ 3.0 E -8	_____	/
I-133	<input type="checkbox"/> ≤ 1.0 E -8	_____	/	Zn-65	<input type="checkbox"/> ≤ 9.0 E -9	_____	/
Mn-52	<input type="checkbox"/> ≤ 2.0 E -8	_____	/	Am-241	<input type="checkbox"/> ≤ 0.1 E -6	_____	/
Mn-54	<input type="checkbox"/> ≤ 5.0 E -8	_____	/	Pu-238	<input type="checkbox"/> ≤ 0.1 E -6	_____	/
Ra-226 + 228	<input type="checkbox"/> ≤ 3.0 E -11	_____	/	Pu-239	<input type="checkbox"/> ≤ 0.1 E -6	0	/ 3.49E-5
Rb-83	<input type="checkbox"/> ≤ 2.0 E -8	_____	/	U-234	<input type="checkbox"/> ≤ 5.0 E -8	0	/ 3.49E-5
Others:				Others:			
				U235 (93.5%)		0	/ 3.49E-5
				U238		0	/ 3.49E-5
				U236		0	/ 3.49E-5

Other Contaminants

Metal Contaminants	Present Below LOC (in ppm)	Range if above LOC (in ppm)	Additional Contaminants	Min. / Max
Aluminum	<input type="checkbox"/> ≤ 5.0	_____ to _____ ppm	Chemical Oxygen Demand (COD)	_____ to _____ mg/l
Boron	<input type="checkbox"/> ≤ 5.0	_____ to _____ ppm	Total Suspended Solids (TSS)	_____ to _____ mg/l
Cobalt	<input type="checkbox"/> ≤ 1.0	_____ to _____ ppm	<input type="checkbox"/> Total Nitrogen or (only one entry needed)	_____ to _____ mg/l
Copper	<input type="checkbox"/> ≤ 1.0	_____ to _____ ppm	<input type="checkbox"/> Total Nitrates	_____ to _____ mg/l
Vanadium	<input type="checkbox"/> ≤ 0.10	0 to 1.2 ppm		
Zinc	<input checked="" type="checkbox"/> ≤ 95.40	_____ to _____ ppm		

Radioactive Contaminant Totals:

Total Alpha 3.0E-6 _____ Ci/l
 Total Beta _____ Ci/l
 Total Gamma _____ Ci/l

For TA-55 use only.

Wastewater will be discharged through one of the following:

Acid Line Caustic Line Industrial Waste Line

Yes No Scintillation Cocktail Brand Name _____ Volume _____ Unit _____

Yes No Chemical Treatment for Boilers / Water Chillers

Yes No Industrial Cleaner Type _____ Volume _____ Unit _____

Average daily volume when discharge occurs: 10 _____ Gallons/day Liters/day

Maximum daily volume when discharge occurs: 30 _____ Gallons/day Liters/day

Estimated number of days per year discharge will occur: 10 _____

Estimated total volume per year discharged to the Radioactive Liquid Waste Collection System at TA-50 / TA-21: 300 _____ Gallons Liters

Associated WFF Reference Number:

LDR and Underlying Hazardous Constituents Information - Identify presence of any constituents listed below.

Non-Wastewater / Wastewater Category - Check only one.

Non Wastewater

Wastewater [as defined by 40 CFR 268.2(f)]

Notification of California List Applicability - Check all that apply.

Liquid hazardous waste containing PCBs at a concentration of 50 ppm or greater.

A D001 thru D043 liquid waste containing 134 mg/L or greater of Nickel and/or 130 mg/L or greater of thallium.

A D001 thru D043 waste containing Halogenated Organic Compounds (HOCs) listed in 40 CFR 268, Appendix III, at 1000 ppm or greater.

Notification Of Underlying Hazardous Constituents

(Check the applicable underlying constituents above the concentration levels for D001 - D043 characteristic wastes only)

No Underlying Hazardous Constituents in this waste stream.

HAZCAT Meeting 40 CFR 268.42(c)

Organic Constituents

A2213

Acenaphthylene

Acenaphthene

Acetone

Acetonitrile

Acetophenone

2-Acetyaminofluorene

Acrolein

Acrylamide

Acrylonitrile

Aldicarb sulfone

Aldrin

4-Aminobiphenyl

Aniline

Anthracene

Aramite

alpha-BHC

beta-BHC

delta-BHC

gamma-BHC

Barban

Bendiocarb

Bendiocarb phenol

Benomyl

Benzene

Benz(a)anthracene

Benzal chloride

Benzo(b)fluoranthene

Benzo(k)fluoranthene

Benzo(g,h,i)perylene

Benzo(a)pyrene

Bromodichloromethane

Bromomethane (Methyl bromide)

4-Bromophenyl phenyl ether

n-Butyl alcohol

Butylate

Butyl benzyl phthalate

2-sec-Butyl-4,6-dinitrophenol (Dinoseb)

Carbaryl

Carbenzadim

Carbofuran

Carbofuran phenol

Carbon disulfide

Carbon tetrachloride

Carbosulfan

Chlordane (alpha & gamma isomers)

p-Chloroaniline

Chlorobenzene

Chlorobenzilate

2-Chloro-1,3-butadiene

Chlorodibromomethane

Chloroethane

bis(2-Chloroethoxy) methane

bis(2-Chloroethyl) ether

Chloroform

bis(2-Chloroisopropyl) ether

p-Chloro-m-cresol

2-Chloroethyl vinyl ether

Chloromethane (Methyl chloride)

2-Chloronaphthalene

2-Chlorophenol

1-Chloropropylene

Chrysene

o-Cresol

m-Cresol

p-Cresol

m-Cumenyl methylcarbamate

Cycloate

Cyclohexane

o,p'-DDD

p,p'-DDD

o,p'-DDE

p,p'-DDE

o,p'-DDT

p,p'-DDT

Dibenz(a,h)anthracene

Dibenz(a,e)pyrene

1,2-Dibromo-3-chloropropane

1,2-Dibromoethane (Ethylene dibromide)

Dibromomethane

m-Dichlorobenzene

o-Dichlorobenzene

p-Dichlorobenzene

Dichlorodifluoromethane

1,1-Dichloroethane

1,2-Dichloroethane

1,1-Dichloroethylene

trans-1,2-Dichloroethylene

2,4-Dichlorophenol

2,6-Dichlorophenol

2,4-Dichlorophenoxyacetic acid (2,4-D)

1,2-Dichloropropane

cis-1,3-Dichloropropylene

trans-1,3-Dichloropropylene

Dieldrin

Diethylene glycol, dicarbamate

Diethyl phthalate

p-Dimethylaminoazobenzene

2,4-Dimethyl phenol

Dimethyl phthalate

Dimetilan

Di-n-butyl phthalate

1,4-Dinitrobenzene

4,6-Dinitro-o-cresol

2,4-Dinitrophenol

2,4-Dinitrotoluene

2,6-Dinitrotoluene

Di-n-octyl phthalate

Notification Of Underlying Hazardous Constituents

(Check the applicable underlying constituents above the concentration levels for D001 - D043 characteristic wastes only)

Organic Constituents - continued

- | | | |
|---|--|---|
| <input type="checkbox"/> Di-n-propylnitrosamine
<input type="checkbox"/> 1,4-Dioxane
<input type="checkbox"/> Diphenylamine
<input type="checkbox"/> Diphenylnitrosamine
<input type="checkbox"/> 1,2-Diphenylhydrazine
<input type="checkbox"/> Disulfoton
<input type="checkbox"/> Dithiocarbamates (total)
<input type="checkbox"/> Endosulfan I
<input type="checkbox"/> Endosulfan II
<input type="checkbox"/> Endosulfan sulfate
<input type="checkbox"/> Endrin
<input type="checkbox"/> Endrin aldehyde
<input type="checkbox"/> EPTC
<input type="checkbox"/> Ethyl acetate
<input type="checkbox"/> Ethyl benzene
<input type="checkbox"/> Ethyl cyanide (Propanenitrile)
<input type="checkbox"/> Ethyl ether
<input type="checkbox"/> bis(2-Ethylhexyl) phthalate
<input type="checkbox"/> Ethyl methacrylate
<input type="checkbox"/> Ethylene oxide
<input type="checkbox"/> Famphur
<input type="checkbox"/> Fluoranthene
<input type="checkbox"/> Fluorene
<input type="checkbox"/> Formetanate hydrochloride
<input type="checkbox"/> Formparanate
<input type="checkbox"/> Heptachlor
<input type="checkbox"/> Heptachlor epoxide
<input type="checkbox"/> Hexachlorobenzene
<input type="checkbox"/> Hexachlorobutadiene
<input type="checkbox"/> Hexachlorocyclopentadiene
<input type="checkbox"/> Hexachlorodibenzo-p-dioxins (HxCDDs)
<input type="checkbox"/> Hexachlorodibenzo-furans (HxCDFs)
<input type="checkbox"/> Hexachloroethane
<input type="checkbox"/> Hexachloropropylene
<input type="checkbox"/> Indeno (1,2,3-c,d) pyrene
<input type="checkbox"/> Iodomethane
<input type="checkbox"/> 3-Iodo-2-propynyl n-butylcarbamate
<input type="checkbox"/> Isobutyl alcohol
<input type="checkbox"/> Isodrin
<input type="checkbox"/> Isolan
<input type="checkbox"/> Isosafrole
<input type="checkbox"/> Kepone
<input type="checkbox"/> Methacrylonitrile
<input type="checkbox"/> Methanol | <input type="checkbox"/> Methapyrilene
<input type="checkbox"/> Methiocarb
<input type="checkbox"/> Methomyl
<input type="checkbox"/> Methoxychlor
<input type="checkbox"/> 3-Methylcholanthrene
<input type="checkbox"/> 4,4-Methylene bis(2-chloroaniline)
<input type="checkbox"/> Methylene chloride
<input type="checkbox"/> Methyl ethyl ketone
<input type="checkbox"/> Methyl isobutyl ketone
<input type="checkbox"/> Methyl methacrylate
<input type="checkbox"/> Methyl methansulfonate
<input type="checkbox"/> Methyl parathion
<input type="checkbox"/> Metolcarb
<input type="checkbox"/> Mexacarbate
<input type="checkbox"/> Molinate
<input type="checkbox"/> Naphthalene
<input type="checkbox"/> 2-Naphthylamine
<input type="checkbox"/> o-Nitroaniline
<input type="checkbox"/> p-Nitroaniline
<input type="checkbox"/> Nitrobenzene
<input type="checkbox"/> 5-Nitro-o-toluidine
<input type="checkbox"/> o-Nitrophenol
<input type="checkbox"/> p-Nitrophenol
<input type="checkbox"/> N-Nitrosodiethylamine
<input type="checkbox"/> N-Nitrosodimethylamine
<input type="checkbox"/> N-Nitroso-di-n-butylamine
<input type="checkbox"/> N-Nitrosomethylethylamine
<input type="checkbox"/> N-Nitrosomorpholine
<input type="checkbox"/> N-Nitrosopiperidine
<input type="checkbox"/> N-Nitrosopyrrolidine
<input type="checkbox"/> Oxamyl
<input type="checkbox"/> Parathion
<input type="checkbox"/> PCBs (total)
<input type="checkbox"/> Pebulate
<input type="checkbox"/> Pentachlorobenzene
<input type="checkbox"/> Pentachlorodibenzo-p-dioxins (PeCDDs)
<input type="checkbox"/> Pentachlorodibenzo-furans (PeCDFs)
<input type="checkbox"/> Pentachloroethane
<input type="checkbox"/> Pentachloronitrobenzene
<input type="checkbox"/> Pentachlorophenol
<input type="checkbox"/> Phenacetin
<input type="checkbox"/> Phenanthrene
<input type="checkbox"/> Phenol
<input type="checkbox"/> o-Phenylenediamine | <input type="checkbox"/> Phorate
<input type="checkbox"/> Phthalic acid
<input type="checkbox"/> Phthalic anhydride
<input type="checkbox"/> Physostigmine
<input type="checkbox"/> Physostigmine salicylate
<input type="checkbox"/> Promecarb
<input type="checkbox"/> Pronamide
<input type="checkbox"/> Propham
<input type="checkbox"/> Propoxur
<input type="checkbox"/> Prosulfocarb
<input type="checkbox"/> Pyrene
<input type="checkbox"/> Pyridine
<input type="checkbox"/> Safrole
<input type="checkbox"/> Silvex (2,4,5-TP)
<input type="checkbox"/> 1,2,4,5-Tetrachlorobenzene
<input type="checkbox"/> Tetrachlorodibenzo-p-dioxins (TCDDs)
<input type="checkbox"/> Tetrachlorodibenzofurans (TCDFs)
<input type="checkbox"/> 1,1,1,2-Tetrachloroethane
<input type="checkbox"/> 1,1,1,2,2-Tetrachloroethane
<input type="checkbox"/> Tetrachloroethylene
<input type="checkbox"/> 2,3,4,6-Tertachlorophenol
<input type="checkbox"/> Thiodicarb
<input type="checkbox"/> Thiophanate-methyl
<input type="checkbox"/> Tirpate
<input type="checkbox"/> Toluene
<input type="checkbox"/> Toxaphene
<input type="checkbox"/> Trallate
<input type="checkbox"/> Tribromomethane (Bromoform)
<input type="checkbox"/> 1,2,4-Trichlorobenzene
<input type="checkbox"/> 1,1,1-Trichloroethane
<input type="checkbox"/> 1,1,2-Trichloroethane
<input type="checkbox"/> Trichloroethylene
<input type="checkbox"/> Trichloromonofluoromethane
<input type="checkbox"/> 2,4,5-Trichlorophenol
<input type="checkbox"/> 2,4,6-Trichlorophenol
<input type="checkbox"/> 2,4,5-Trichlorophenoxyacetic acid (2,4,5-T)
<input type="checkbox"/> 1,2,3-Trichloropropane
<input type="checkbox"/> 1,1,2-Trichloro-1,2,2-trifluoroethane
<input type="checkbox"/> Triethylamine
<input type="checkbox"/> tris-(2,3-Dibromopropyl) phosphate
<input type="checkbox"/> Verpolate
<input type="checkbox"/> Vinyl chloride
<input type="checkbox"/> Xylenes (total) |
|---|--|---|

Land Disposal Restriction (LDR) and Underlying Hazardous Constituents Information Form

Notification Of Underlying Hazardous Constituents

(Check the applicable underlying constituents above the concentration levels for D001, D002, D003, and D012 - D043 characteristic wastes only)

Metal/Inorganic Constituents		
<input type="checkbox"/> Antimony	<input type="checkbox"/> Cyanides (Amenable)	<input type="checkbox"/> Selenium
<input type="checkbox"/> Arsenic	<input type="checkbox"/> Fluoride	<input type="checkbox"/> Silver
<input type="checkbox"/> Barium	<input type="checkbox"/> Lead	<input type="checkbox"/> Sulfide
<input checked="" type="checkbox"/> Beryllium	<input type="checkbox"/> Mercury (Retort residues)	<input type="checkbox"/> Thallium
<input type="checkbox"/> Cadmium	<input type="checkbox"/> Mercury - All others	<input type="checkbox"/> Vanadium
<input checked="" type="checkbox"/> Chromium (Total) <i>per memo 7/13/02</i>	<input type="checkbox"/> Nickel	<input type="checkbox"/> Zinc
<input type="checkbox"/> Cyanides (Total)		

ATTACHMENT 3

Summary of Analytical Results

The following constituents are not expected in this waste stream: Tritium; Strontium 90; Cesium 137 or Organics.

This waste is residue from Oralloy processing. Oralloy is 93.5 % U235; < 2 % U234; and approx. 5 % U238. Any Pu239 contamination associated with these samples is expected to be very low based on solubility studies.

Group 1 Results:

- **Sample # IMS ID 200142585** [Chromium (0.14 ug/ml); Zinc (0.3 ug/ml)]
- **Sample # IMS ID 200141050** [pH = 13; Activity (Ci/L): 2.68E-06]
- **Group 1 waste is aqueous electrochemical process solutions with low levels of uranium contamination and less than 0.1 mol/L sodium sulfate. See attached WEF.**

Group 2 Results:

- **Sample # IMS ID 200142586** [Chromium (3.1 ug/ml); Nickel (3.8 ug/ml); Vanadium (0.7 ug/ml); Zinc (0.58 ug/ml)]
- **Sample # IMS ID 200141051** [pH = 11; Activity (Ci/L): 3.49E-05]
- **Group 2 waste is aqueous electrochemical process solutions with low levels of uranium contamination and less than 0.1 mol/L sodium sulfate.**

Group 3 Results:

- **Sample # IMS ID 200142587** [Beryllium (0.1 ug/ml); Chromium (0.11 ug/ml); Zinc (0.43 ug/ml)]
- **Sample # IMS ID 200141052** [pH = 10; Activity (Ci/L): 2.68E-06]
- **Group 3 waste is aqueous electrochemical process solutions with low levels of uranium contamination and less than 0.1 mol/L sodium sulfate.**

Group 4 Results:

- **Sample # IMS ID 200142588** [Beryllium (0.1 ug/ml); Chromium (6 ug/ml); Vanadium (1.2 ug/ml); Zinc (0.34 ug/ml)]
- **Sample # IMS ID 200141053** [pH = 11; Activity (Ci/L): 2.69E-06]
- **Group 4 is aqueous electrochemical process solutions with low levels of uranium contamination and less than 0.1 mol/L sodium sulfate.**

Waste Exception Form

WEF No.
WPF# WEF1

Completed by Waste Generator

<input checked="" type="checkbox"/> On-going <input type="checkbox"/> One-time	WPF No.	CWDR/TWSR No. NA	Item No. NA – RLWTF (TA-50) Liquid Waste
<input type="checkbox"/> Hazardous/Chemical <input type="checkbox"/> Low-Level Waste <input checked="" type="checkbox"/> Transuranic <input type="checkbox"/> Mixed Low-Level Waste <input checked="" type="checkbox"/> Radioactive Liquid Waste <input type="checkbox"/> Other _____			

Waste Acceptance Criteria [LANL WAC (February 2002) – Liquid Radioactive Waste Treatment Facility, RLWTF]

1.4.1 Radionuclide Content. The total alpha radionuclide concentration of a waste stream in the “Caustic” waste line may not exceed 4.5E-3 Ci/L.

1.4.2 Chemical Waste. Inorganic wastes with a pH from 12.5 to 14 are also permitted to discharge to RLWTF (RCRA Code D002) in the volume range of 0 to 50 gallons/discharge.

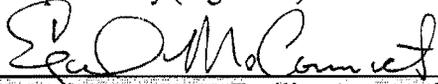
1.4.2 Chemical Waste. Liquid waste streams that contain non-radioactive constituents below the concentration limits in Table 1.3 are acceptable for discharge to the RLWTF. [Chromium, Allowable Concentration (mg/l) is <5.0]

Reason for Variance and Justification

Small Quantity (average daily volume: 10 liters/day), **Infrequent Generation** (ten times per year), **Characteristic Waste**.

Waste Characteristics:

- D002 - Corrosive (pH – 13)
- D007 – Toxicity Characteristic Metal - Chromium (6 PPM)
- Vanadium (1.2 PPM)

Requested by (Print)	Requested by (Signature)	Z Number	Date
Euan D Mc Cormick		93573	2/30/02

Waste Management Facility Approval

Special Instructions and Comments

- Discharge to the TA-55 Caustic Waste Line [WPF, Attach. 2 - Wastewater Characteristics for RLWTF (TA-50, TA-21), Page 1]
- Notify RLWTF prior to discharge of this waste stream.

Basis for Exemption or Denial

Approved because of the **Small Quantity** and **Infrequent Generation (10 liters, ten discharges per year)** and the waste is a **Characteristic Waste**.

<input type="checkbox"/> Approved <input type="checkbox"/> Rejected	Team Leader (Signature)	Z Number	Date
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Los Alamos

NATIONAL LABORATORY

Memorandum

*Pit Disassembly and Nuclear Fuels
Technologies (NMT-15)*

To: Sherry L Evans-Carmichael

From: D.A. Costa, NMT-15, E530

Cc: Brad Schake, NMT-15

Steve Mckee, NMT-15

Phone/Fax: 665-8958/996-1107

Date: May 24, 2002

Symbol # DC-2002-003

Subject: Waste Profile Form (WPF) development for the HEU Electro-decontamination process.

The uranium electro-decontamination WPF should treat the level of VOCs generated during this process as zero using Acceptable Knowledge. There are no organics used in this process, nor are any organics located near this process. The level of plutonium found in the process streams is very low, as quantified by scintillation alpha counting and alpha spectroscopy. The final radioactive alpha constituents in the waste streams measure less than 3×10^{-6} Ci/L. This includes all of the HEU and TRU constituents, combined.

The HEU decontaminated in this process is Oralloy.
Isotopic analysis on the HEU:

U-238	5.35%	3.33×10^{-7} Ci/g
U-236	0.52%	6.34×10^{-5} Ci/g
U-235	93.20%	2.10×10^{-6} Ci/g
U-234	1.02%	6.19×10^{-3} Ci/g

Total specific activity for HEU is 6.54×10^{-5} Ci/g

If you have any further questions, please feel free to contact either Brad Schake or me.

TA-55 Radiochemistry Analytical Report

IMS Sample ID: 200141050
Cust Samp ID: GROUP I
Submitter: BRAD SCHAKE
Instrument: Alpha III
Type of Waste: Caustic

Date Analyzed: 03/07/01
Analyst: Radzinski/CCT
Program: K13Y0000
Total Volume (L): 22

Analytical Results

Net Counts (cpm): 0

Background (cpm): 9

pH = 13

Activity (Ci/L): 2.68E-06

Comments:

Activity Level: This sample is below discard limits. (4.5e-3 Ci/L)

I certify that this sample contains no materials other than the matrix and volume indicated above. This is a representative sample of an individual solution storage device. Current SOPs were followed in the origination of this item and I believe it will meet approved discard limits.

David Costa 03/2/01
Submitter's printed name and signature

EDC
Process Status

[Signature]
Supervisor's printed name and Group

_____ liters
H2O wash

NMT-7 LWM Inspector

Date ____/____/____

Time ____:____ a.m.
p.m.

Analytical Chemistry Report

Sample ID: 200142585 Group: NMT-15 QA: N Priority: 1
 Submission ID: 100048360 Acct: N Logged: 22-May-2001
 User sample ID: GROUP 1
 Sample Type: EDC SOLUTION - RCRA
 Customer Cost Code: K13Y00000000
 Requester: DAVE COSTA MS: Phone:

Radioactive Elements: U235, PU239
 Radiation: Y

VOL OR WGT:

Approved by: Drake, Lawrence R. 31-May-2001 14:51

Analytical Operation: IC-ANIONS-L Task ID: 300292531
 Date Completed: 23-May-2001 17:25 Replicates: 1 Version: 1

DESCRIPTION: IC-ANIONS:F,CL,SO4,N03,H04...

Component	Results	Units
FLUORIDE	< 20 [1]	ug/ml

[1] FLUORIDE:

Could not analyze for fluoride at lower concentrations because the sample contains a large amount of sulfate ion.

Notebook Reference: CAAC-0143, PAGE 74-82

Analyst: VMM, PTM

Approved by: Martinez, Patrick T. 23-May-2001 17:26

Analytical Operation: PSSUR-L Task ID: 300292532
 Date Completed: 31-May-2001 13:22 Replicates: 1 Version: 1

DESCRIPTION: PS-ELEMENTAL ANALYSIS IN LIQUIDS

Component	Results	Units
SILVER	< 0.01	ug/ml
ARSENIC	< 0.04	ug/ml
BARIUM	< 0.05	ug/ml
BERYLLIUM	< 0.04	ug/ml
CADMIUM	< 0.01	ug/ml
CHROMIUM	0.14	ug/ml
MERCURY	< 0.1	ug/ml

NICKEL	< 0.05	ug/ml
LEAD	< 0.02	ug/ml
ANTIMONY	< 0.01	ug/ml
THALLIUM	< 0.05	ug/ml
VANADIUM	< 0.3	ug/ml
ZINC	0.3	ug/ml
--PSSUR-L ANALYSIS AAM/LRD ANALYST(S)		

Notebook Reference: 052901PQS NMT1-0100 PG71

Additional Information:

Analyst: Drake, Lawrence R.

Approved by: Drake, Lawrence R. 31-May-2001 14:51

TA-55 Radiochemistry Analytical Report

IMS Sample ID: 200141051
Cust Samp ID: GROUP 2
Submitter: BRAD SCHAKE
Instrument: Alpha IV
Type of Waste: Acid/HNO3

Date Analyzed: 03/07/01
Analyst: Radzinski/CCT
Program: K13Y0000
Total Volume (L): 4

Caustic Analytical Results

Net Counts (cpm): 3

Background (cpm): 3

pH = 2.11 *ca* 03/21/01

Activity (Ci/L): 3.49E-05

Comments:

Activity Level: **This sample is below discard limits. (6e-5 Ci/L)**

I certify that this sample contains no materials other than the matrix and volume indicated above. This is a representative sample of an individual solution storage device. Current SOPs were followed in the origination of this item and I believe it will meet approved discard limits.

David Carr *[Signature]* 03/21/01
Submitter's printed name and signature

EOL
Process Status

[Signature]
Supervisor's printed name and Group

_____ liters
H2O wash

NMT-7 LWM Inspector

Date ___/___/___ Time ___:___ a.m.
p.m.

Analytical Chemistry Report

Sample ID: 200142586 Group: NMT-15 QA: N Priority: 1
 Submission ID: 100048360 Acct: N Logged: 22-May-2001
 User sample ID: GROUP 2
 Sample Type: EDC SOLUTION - RCRA
 Customer Cost Code: K13Y00000000
 Requester: DAVE COSTA MS: Phone:

Radioactive Elements: U235, PU239
 Radiation: Y

VOL OR WGT:

Approved by: Drake, Lawrence R. 31-May-2001 14:52

Analytical Operation: IC-ANIONS-L Task ID: 300292534
 Date Completed: 23-May-2001 17:25 Replicates: 1 Version: 1

DESCRIPTION: IC-ANIONS:F,CL,SO4,N03,H04...

Component	Results	Units
FLUORIDE	< 20 [1]	ug/ml

[1] FLUORIDE:

Could not analyze for fluoride at lower concentrations because the sample contain a large amount of sulfate ion.

Notebook Reference: CAAC-0143, PAGE 74-82

Analyst: VMM, PTM

Approved by: Martinez, Patrick T. 23-May-2001 17:26

Analytical Operation: PSSUR-L Task ID: 300292535
 Date Completed: 31-May-2001 13:22 Replicates: 1 Version: 1

DESCRIPTION: PS-ELEMENTAL ANALYSIS IN LIQUIDS

Component	Results	Units
SILVER	< 0.01	ug/ml
ARSENIC	< 0.04	ug/ml
BARIUM	< 0.05	ug/ml
BERYLLIUM	< 0.04	ug/ml
CADMIUM	< 0.01	ug/ml
CHROMIUM	3.1	ug/ml
MERCURY	< 0.1	ug/ml

NICKEL	3.8	ug/ml
LEAD	< 0.02	ug/ml
ANTIMONY	< 0.01	ug/ml
THALLIUM	< 0.05	ug/ml
VANADIUM	0.7	ug/ml
ZINC	0.58	ug/ml
--PSSUR-L ANALYSIS AAM/LRD ANALYST(S)		

Notebook Reference: 052901PQS NMT1-0100 PG71

Additional Information:

Analyst: Drake, Lawrence R.

Approved by: Drake, Lawrence R. 31-May-2001 14:52

TA-55 Radiochemistry Analytical Report

IMS Sample ID: 200141052
Cust Samp ID: GROUP 3
Submitter: BRAD SCHAKE
Instrument: Alpha III
Type of Waste: **Caustic**

Date Analyzed: 03/07/01
Analyst: Radzinski/CCT
Program: K13Y0000
Total Volume (L): 2

Analytical Results

Net Counts (cpm): 0

Background (cpm): 9

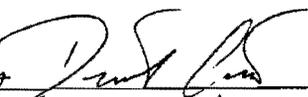
pH = 10

Activity (Ci/L): 2.68E-06

Comments:

Activity Level: **This sample is below discard limits. (4.5e-3 Ci/L)**

I certify that this sample contains no materials other than the matrix and volume indicated above. This is a representative sample of an individual solution storage device. Current SOPs were followed in the origination of this item and I believe it will meet approved discard limits.

David Cosca  03/21/01
Submitter's printed name and signature

EDC
Process Status


Supervisor's printed name and Group

_____ liters
H2O wash

NMT-7 LWM Inspector

Date ___/___/___

Time ___:___ a.m.
p.m.

Analytical Chemistry Report

Sample ID: 200142587 Group: NMT-15 QA: N Priority: 1
 Submission ID: 100048360 Acct: N Logged: 22-May-2001
 User sample ID: GROUP 3
 Sample Type: EDC SOLUTION - RCRA
 Customer Cost Code: K13Y00000000
 Requester: DAVE COSTA MS: Phone:

Radioactive Elements: U235, PU239
 Radiation: Y

VOL OR WGT:

Approved by: Drake, Lawrence R. 31-May-2001 14:53

Analytical Operation: IC-ANIONS-L Task ID: 300292537
 Date Completed: 23-May-2001 17:25 Replicates: 1 Version: 1

DESCRIPTION: IC-ANIONS:F,CL,SO4,N03,H04...

Component	Results	Units
FLUORIDE	< 20 [1]	ug/ml

[1] FLUORIDE:

Could not analyze for fluoride at lower concentrations because the sample contains a large amount of sulfate ion.

Notebook Reference: CAAC-0143, PAGE 74-82

Analyst: VMM, PTM

Approved by: Martinez, Patrick T. 23-May-2001 17:26

Analytical Operation: PSSUR-L Task ID: 300292538
 Date Completed: 31-May-2001 13:22 Replicates: 1 Version: 1

: DESCRIPTION: PS-ELEMENTAL ANALYSIS IN LIQUIDS

Component	Results	Units
SILVER	< 0.01	ug/ml
ARSENIC	< 0.04	ug/ml
BARIUM	< 0.05	ug/ml
BERYLLIUM	0.1	ug/ml
CADMIUM	< 0.01	ug/ml
CHROMIUM	0.11	ug/ml
MERCURY	< 0.1	ug/ml

NICKEL	< 0.05	ug/ml
LEAD	< 0.02	ug/ml
ANTIMONY	< 0.01	ug/ml
THALLIUM	< 0.05	ug/ml
VANADIUM	< 0.3	ug/ml
ZINC	0.43	ug/ml
--PSSUR-L ANALYSIS AAM/LRD ANALYST(S)		

Notebook Reference: 052901PQS NMT1-0100 PG71

Additional Information:

Analyst: Drake, Lawrence R.

Approved by: Drake, Lawrence R. 31-May-2001 14:53

TA-55 Radiochemistry Analytical Report

IMS Sample ID: 200141053
Cust Samp ID: GROUP 4
Submitter: BRAD SCHAKE
Instrument: Alpha IV
Type of Waste: Caustic

Date Analyzed: 03/07/01
Analyst: Radzinski/CCT
Program: K13Y0000
Total Volume (L): 2

Analytical Results

Net Counts (cpm): 0

Background (cpm): 3

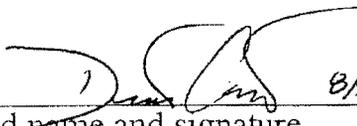
pH = 11

Activity (Ci/L): 2.69E-06

Comments:

Activity Level: This sample is below discard limits. (4.5e-3 Ci/L)

I certify that this sample contains no materials other than the matrix and volume indicated above. This is a representative sample of an individual solution storage device. Current SOPs were followed in the origination of this item and I believe it will meet approved discard limits.

DAVID COSTA  8/21/01
Submitter's printed name and signature

EDC
Process Status


Supervisor's printed name and Group

_____ liters
H2O wash

NMT-7 LWM Inspector

Date ___/___/___ Time ___:___ a.m.
p.m.

Page 1

Analytical Chemistry Report

Sample ID: 200142588 Group: NMT-15 QA: N Priority: 1
 Submission ID: 100048360 Acct: N Logged: 22-May-2001
 User sample ID: GROUP 4
 Sample Type: EDC SOLUTION - RCRA
 Customer Cost Code: K13Y00000000
 Requester: DAVE COSTA MS: Phone:

Radioactive Elements: U235, PU239
 Radiation: Y

VOL OR WGT:

Approved by: Drake, Lawrence R. 31-May-2001 14:56

Analytical Operation: IC-ANIONS-L Task ID: 300292540
 Date Completed: 23-May-2001 17:25 Replicates: 1 Version: 1

DESCRIPTION: IC-ANIONS:F,CL,SO4,N03,H04...

Component	Results	Units
FLUORIDE	< 20 [1]	ug/ml

[1] FLUORIDE:

Could not analyze for fluoride at lower concentrations because the sample contains a large amount of sulfate ion.

Notebook Reference: CAAC-0143, PAGE 74-82

Analyst: VMM, PTM

Approved by: Martinez, Patrick T. 23-May-2001 17:26

Analytical Operation: PSSUR-L Task ID: 300292541
 Date Completed: 31-May-2001 13:22 Replicates: 1 Version: 1

DESCRIPTION: PS-ELEMENTAL ANALYSIS IN LIQUIDS

Component	Results	Units
SILVER	< 0.01	ug/ml
ARSENIC	< 0.04	ug/ml
BARIUM	< 0.05	ug/ml
BERYLLIUM	0.1	ug/ml
CADMIUM	< 0.01	ug/ml
CHROMIUM	6	ug/ml
MERCURY	< 0.1	ug/ml

NICKEL	< 0.05	ug/ml
LEAD	< 0.02	ug/ml
ANTIMONY	< 0.01	ug/ml
THALLIUM	< 0.05	ug/ml
VANADIUM	1.2	ug/ml
ZINC	0.34	ug/ml
--PSSUR-L ANALYSIS AAM/LRD ANALYST(S)		

Notebook Reference: 052901PQS NMT1-0100 PG71

Additional Information:

Analyst: Drake, Lawrence R.

Approved by: Drake, Lawrence R. 31-May-2001 14:56

WASTE PROFILE FORM

WPF #: 35269

11-Sep-2003 10:21 AM

(Version: 1)

Generator: COSTA, DAVID NMT15
WMC: MCCORMICK, EGAN FWO-SWO
FROM: FWO-SWO

MS: E530
MS: E507
MS: J595/5-4000

WASTE PROFILE (WPF) EXTENSION QUESTIONNAIRE

Our files indicate that your WPF#: 35269 was submitted approximately one year ago. Please review the attached copy and answer the following questions concerning your waste stream to determine whether to renew or void your WPF. Please return the completed questionnaire to FWO-SWO at the address listed below. If your waste stream remains the same, your WPF will be extended for another year. If the original generator is no longer with the generating group or generating this waste, a new WPF will need to be filled out with a new generator. Upon receipt of this questionnaire with a signed Extension Certification, we will send you a return receipt indicating that your WPF is valid for another year. If there are changes in your waste stream, a new WPF will need to be completed.

Are you currently producing the same type of waste as indicated on your WPF#: 35269

YES _____ NO _____

If yes, please sign the Extension Certification below

If no, will you be producing the same type of waste in the near future?

YES _____ NO _____

If yes, please sign the Extension Certification below

If no, will you be producing a different type of waste?

YES _____ NO _____

If no, sign the Void Approval below to indicate that your WPF should be voided

If yes, please submit a new WPF, along with this memo. We will then void your previous WPF and process a new one

Extension Certification

I am producing or will produce the same type of waste as indicated in WPF# 35269

Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Extension->

Signed _____

Date _____

9/22/03

Void Approval

I will no longer be generating or will be producing a different type or composition (a new WPF will be submitted) of waste as indicated in WPF# 35269

Void->

Signed _____

Date _____

NOTE: PLEASE FOLD AND STAPLE THE FORM TO THE LINE BELOW AND RETURN TO ADDRESS PROVIDED

TO: FWO-SWO

MS: J595

PHONE: 5-4000

WASTE PROFILE FORM

WPF #: 35269

(Version: 2)

14-Sep-2004 09:24 AM

Generator: COSTA, DAVID NMT15
WMC: MCCORMICK, EGAN FWO-SWO
FROM: FWO-SWO

MS : E530
MS : E507
MS : J595/5-4000

WASTE PROFILE (WPF) EXTENSION QUESTIONNAIRE

Our files indicate that your WPF#: 35269 was submitted approximately one year ago. Please review the attached copy and answer the following questions concerning your waste stream to determine whether to renew or void your WPF. Please return the completed questionnaire to FWO-SWO at the address listed below. If your waste stream remains the same, your WPF will be extended for another year. If the original generator is no longer with the generating group or generating this waste, a new WPF will need to be filled out with a new generator. Upon receipt of this questionnaire with a signed Extension Certification, we will send you a return receipt indicating that your WPF is valid for another year. If there are changes in your waste stream, a new WPF will need to be completed.

Are you currently producing the same type of waste as indicated on your WPF#: 35269

YES NO

If yes, please sign the Extension Certification below

If no, will you be producing the same type of waste in the near future?

YES NO

If yes, please sign the Extension Certification below

If no, will you be producing a different type of waste?

YES NO

If no, sign the Void Approval below to indicate that your WPF should be voided

If yes, please submit a new WPF, along with this memo. We will then void your previous WPF and process a new one

Extension Certification

I am producing or will produce the same type of waste as indicated in WPF# 35269

Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Extension-> Signed David Costa Date 9/23/04

Void Approval

I will no longer be generating or will be producing a different type or composition (a new WPF will be submitted) of waste as indicated in WPF# 35269

Void-> Signed _____ Date _____

NOTE: PLEASE FOLD AND STAPLE THE FORM TO THE LINE BELOW AND RETURN TO ADDRESS PROVIDED

TO: FWO-SWO

MS: J595

PHONE: 5-4000

**LOS ALAMOS NATIONAL LABORATORY
WASTE PROFILE SYSTEM**

WPF #: 35576

31-Jan-2008 11:47 AM

(Version: 1)

p.1

Generator :	LUGO, JERRY L	MS :	E530	PH :	6674304	Z#:	087360
WMC :	MCCORMICK, EGAN	MS :	E507	PH :	5056678158	Z#:	093573
Contact :							
RCRA Rev :	CORIZ MICHELLE L	MS :	J599	PH :	5056656411	Z#:	120950
Status :	EXPIRE	Activation Date :	01/24/2003	Expiration Date:	01/24/2004		
Group :	NMT15	TA :	55	Bldg :	000004	Room :	105

You are required to keep a copy of the WPF(s) in your files for at least three years. This WPF(s) is valid for one year or as long as the composition of the waste you have characterized remains the same. Should your waste change, please submit a new WPF to Waste Acceptance Group.

Waste Accumu : None of the Above Site ID#
 Method of Char : Analysis/Documents Attached
 Chemical/Physical Analysis Number: Attached

Waste Type : **Process Waste/Spent Chemical/Other**
 Waste Classes: RCA Waste - **RCA Waste**
 RAD Waste - **Radioactive-LL**
 WW Info - **RLWTF**
 Classif/Sensi - **N**

Waste Category: **Inorganic**

Waste Sources : **Materials Processing/Production**

Waste Matrix : **Aqueous**

Matrix Type : **Homogeneous**

Process Desc :
 WASTE CAUSTIC SOLUTION GENERATED DURING DECONTAMINATION OF GLOVEBOXES UNDER NMT15-WI-019/006, "DECONTAMINATION OF GB173 AND GB174". ANALYTICAL RESULTS FOR RCRA METALS ATTACHED. RADIOACTIVITY DATA TO BE PROVIDED PRIOR TO DISPOSING SOLUTION TO RLWTF. PH RANGES FROM 11 TO 14 WITH PH 14 BEING PREDOMINANT.

Waste Desc : **N/A**

Ignitability : **Not ignitable**

Corrosivity : **>= 12.5**

Reactivity : **Non-reactive**

Boiling Point : **Not applicable**

Toxicity Characteristic Metals:

Contaminant	Method	Limit	Min	Max	Unit
ARSENIC	TOTA	Y			PPM
CADMIUM	TOTA	Y			PPM
SILVER	TOTA	Y			PPM
LEAD	TOTA	Y			PPM
MERCURY	TOTA	Y			PPM
SELENIUM	TOTA		1	15	PPM
BARIUM	TOTA	Y			PPM

LOS ALAMOS NATIONAL LABORATORY WASTE PROFILE SYSTEM

WPF #: 35576

31-Jan-2008 11:47 AM

(Version: 1)

p.2

CHROMIUM

TOTA Y

PPM

Toxicity Characteristic Organic Compounds: N/A

Additional Chemical Constituents and Contaminants:

CAS NO	Constituent	MIN	MAX	UOM
	SPENT CAUSTIC DECONTAMINATION SOLUTION	95	100	%

Waste Water Characteristics for RLWTF

Waste Production: Other

Radionuclide Contaminants :

Contaminant	Limit	Min	Max	Unit	Method
PU-239		0.00001	0.000025	Ci/l	

Total Alpha: 2.50E-05 Ci/l

Average daily flow when discharge occurs: 30 LIT

Maximum daily flow when discharge occurs: 30 LIT

Estimated number of days discharge will occur: 2

Estimated total volume per year discharged to the RLWC at TA-50: 60 LIT

Wastewater will be discharged through the following: CAUS Line

LDR and Underlying Hazardous Constituents Information

Non-Wastewater/Wastewater Category: **Non Wastewater**

WASTE CHARACTERIZATION INFORMATION

Radioactivity Category : **RADIOACTIVE-LL**

RCRA Category : **HAZARDOUS WASTE**

Secondary Info : N/A

Waste Classification : **MIXED LOW-LEVEL WASTE**

Waste Acceptances : **TA-50 Acceptance**

EPA Hazardous Waste Code : **D002 D010**

Notification Of Underlying Hazardous Constituents:

Constituents

Arsenic

Barium

Cadmium

Chromium (Total)

Lead

Mercury - All Others

Selenium

Silver

LOS ALAMOS NATIONAL LABORATORY
WASTE PROFILE SYSTEM

WPF #: 35576

31-Jan-2008 11:47 AM

(Version: 1)

p.3

GWCP Information

Section 1 - Waste Prevention/Minimization (answer all questions)

Can hazard segregation, elimination, or material substitution be used?

Yes* No

Can any of the materials in the waste stream be recycled or reused

Yes* No

Has waste minimization been incorporated into procedures or other process controls?

Yes No

Can this waste be generated outside a RCA?

Yes* No N/A

*Provide Comment

Section 6 - Work Control Documentation (answer all questions)

Do the procedures for this process cover how to manage this waste?

Yes No (Provide comments)

Do the procedures for this process cover controls to prevent changes to waste constituents and concentrations or addition or removal of waste?

Yes No (Provide comments)

Section 7 - Package and Storage Control

Describe how the waste will be packaged in according to the applicable WAC:

Identify the storage management controls that will be used for this waste stream: (check all that apply)

- Tamper indication devices:
- Limited use locks with log-in for waste
- Locked cabinet or building
- Other (describe)

Section 8 - Waste Certification Statements (check only one)

- Waste appears to meet WAC chapter for:
- Waste needs exception/exemption for treatment, storage, or disposal at:
- Waste does not meet the criteria for any known TSDF, (DOE approval is required. Contact the Waste Management Program Office for assistance.)

Estimated Annual Volume (m3):

RECEIVED NOV 14 2002

LOS ALAMOS
National Laboratory

WASTE PROFILE FORM

ORIGINAL

Contact (if other than given below)		For rapid processing, complete all sections in black or blue ink and mail to: EM-SWO at MS J595. For assistance with completing this form, call EM-SWO at 5-4000.			Reference Number 35576 (For EM-SWO use only.)	
Generator's Z Number 087360	Waste Generator's Name (print) Jerry L. Lugo		WMC's Z Number 093573	WMC's Name (print) Egan McCormick		
Generator's Telephone 7-4304	Generator's Mail Stop E 530	Waste Generating Group NMT 15	Waste Stream Technical Area 55	Building 4	Room 105	
Waste Accumulation (Check only one.)		<input type="checkbox"/> Satellite Accumulation Area <input type="checkbox"/> Less-than-90-days Storage Area <input type="checkbox"/> TSDF <input type="checkbox"/> Universal Waste Storage Area <input checked="" type="checkbox"/> None of the Above			Site no: _____ Site no: _____ Site no: _____ Site no: _____	
ER Use Only		<input type="checkbox"/> ER Site			PRS #: _____	
Method of Characterization (Check as many as apply.)		<input checked="" type="checkbox"/> Chemical/Physical Analysis <input type="checkbox"/> Radiological Analysis <input type="checkbox"/> PCB Analysis <input type="checkbox"/> Acceptable Knowledge Documentation <input type="checkbox"/> MSDS			Sample #: Attached _____ Sample #: _____ Sample #: _____ Documentation #: _____	

Section 1 - Chemical and Physical Information

Waste Type (Check only one.)	Waste Category (Check as many as apply.)	Waste Source (Check only one.)	Waste Matrix (Check only one.)
<input type="checkbox"/> Unused/Unspent Chemical (Complete all sections as appropriate.) <input checked="" type="checkbox"/> Process Waste/Spent Chemical/ other (Complete all sections.) <input type="checkbox"/> Green is Clean Waste (Complete all sections as appropriate.)	<input checked="" type="checkbox"/> Inorganic <input type="checkbox"/> Organic Volatile Organics <input type="checkbox"/> < 500 ppm <input type="checkbox"/> ≥ 500 ppm <input type="checkbox"/> Solvent * <input type="checkbox"/> Degreaser * <input type="checkbox"/> Dioxin <input type="checkbox"/> Electroplating <input type="checkbox"/> Treated Hazardous waste residue <input type="checkbox"/> Explosive process <input type="checkbox"/> Infectious/Medical <input type="checkbox"/> Biological <input type="checkbox"/> Beryllium <input type="checkbox"/> Empty Container (See instructions) <input type="checkbox"/> Battery (See instructions) Asbestos <input type="checkbox"/> friable <input type="checkbox"/> non-friable PCB Source Concentration <input type="checkbox"/> PCB < 50 ppm <input type="checkbox"/> PCB ≥ 50 - < 500 ppm <input type="checkbox"/> PCB ≥ 500 ppm <input type="checkbox"/> Other (Describe below)	Routine Waste <input type="checkbox"/> Decon <input checked="" type="checkbox"/> Materials Processing/Production <input type="checkbox"/> Research/Development/Testing <input type="checkbox"/> Scheduled Maintenance <input type="checkbox"/> Housekeeping - Routine <input type="checkbox"/> Spill Cleanup - Routine <input type="checkbox"/> Sampling - Routine Monitoring <input type="checkbox"/> Other (Describe below) Non-routine Waste <input type="checkbox"/> Abatement <input type="checkbox"/> Construction/Upgrades <input type="checkbox"/> Demolition <input type="checkbox"/> Decon/Decom <input type="checkbox"/> Investigative Derived <input type="checkbox"/> Orphan/Legacy <input type="checkbox"/> Remediation/Restoration <input type="checkbox"/> Repacking (Secondary) <input type="checkbox"/> Unscheduled Maintenance <input type="checkbox"/> Housekeeping - Non-routine <input type="checkbox"/> Spill Cleanup - Non-routine <input type="checkbox"/> UST - Non-petroleum <input type="checkbox"/> UST - Petroleum <input type="checkbox"/> Other (Describe below)	Gas <input type="checkbox"/> ≤ 1.5 Atmospheres pressure <input type="checkbox"/> > 1.5 Atmospheres pressure <input type="checkbox"/> Liquefied compressed gas Liquid <input checked="" type="checkbox"/> Aqueous <input type="checkbox"/> Non-aqueous <input type="checkbox"/> Suspended Solids/ Aqueous <input type="checkbox"/> Suspended Solids/ Non-aqueous Solid <input type="checkbox"/> Powder/Ash <input type="checkbox"/> Solid <input type="checkbox"/> Sludge <input type="checkbox"/> Absorbed liquid
Waste Classes Radiological Information Was Waste Generated in a RCA? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Non-radioactive <input checked="" type="checkbox"/> Radioactive <input checked="" type="checkbox"/> Low-Level <input type="checkbox"/> Transuranic	Wastewater Information <input type="checkbox"/> Wastewater for SWSC (TA-46) (Complete Attachment 1) <input checked="" type="checkbox"/> Wastewater for RLWTF (TA-50/TA-21) (Complete Attachment 2) <input type="checkbox"/> Wastewater for TA-16 (HE)		Matrix Type (Check only one.) <input checked="" type="checkbox"/> Homogeneous <input type="checkbox"/> Heterogeneous (Describe below)
Classification Information <input checked="" type="checkbox"/> Unclassified <input type="checkbox"/> Classified/Sensitive			

Waste/Process Description (Chemical formulas may be used in this field.)
 Waste caustic solution generated during decontamination of gloveboxes under NMT15-WI-019/006, "Decontamination of GB173 and GB174."
 Analytical results for RCRA metals attached. Radioactivity data to be provided prior to disposing solution to RLWTF. pH ranges from 11 to 14 with
 pH 14 being predominant.

WASTE PROFILE FORM

Section 2 - Characteristics

Ignitability (Check only one.)		Corrosivity (Check only one.)		Reactivity (Check as many as apply.)		Boiling Point (Check only one.)	
(°F)	(°C)	(pH)				(°F)	(°C)
<input type="checkbox"/> < 73	< 22.8	<input type="checkbox"/> ≤ 2.0		<input type="checkbox"/> RCRA Unstable		<input type="checkbox"/> ≤ 95	≤ 35
<input type="checkbox"/> 73 - 99	22.8 - 37.2	<input type="checkbox"/> 2.1 - 4.0		<input type="checkbox"/> Water Reactive		<input type="checkbox"/> > 95	> 35
<input type="checkbox"/> 100 - 139	37.8 - 59.4	<input type="checkbox"/> 4.1 - 6.0		<input type="checkbox"/> Cyanide Bearing (> 250 ppm)			
<input type="checkbox"/> 140 - 200	60.0 - 99.3	<input type="checkbox"/> 6.1 - 9.0		<input type="checkbox"/> Sulfide Bearing (> 500 ppm)			
<input type="checkbox"/> > 200	> 99.3	<input type="checkbox"/> 9.1 - 12.4		<input type="checkbox"/> Pyrophoric			
<input type="checkbox"/> EPA Ignitable - Non-liquid		<input checked="" type="checkbox"/> ≥ 12.5		<input type="checkbox"/> Shock Sensitive			
<input type="checkbox"/> DOT Flammable Gas		<input type="checkbox"/> Liquid corrosive to steel		<input type="checkbox"/> Explosive - DOT Div. _____			
<input type="checkbox"/> DOT Oxidizer		<input type="checkbox"/> Non-aqueous		<input checked="" type="checkbox"/> Non-reactive		<input checked="" type="checkbox"/> Not applicable	
<input checked="" type="checkbox"/> Not ignitable							

Identify for all contaminants listed.	Characterization Method			Concentration of Contaminants		
	AK	TCLP	Total	None or Non-detect	Present Below Regulatory Limit	Above Regulatory Limit Minimum Maximum
Toxicity Characteristic Metals						(Concentration in ppm only.)
Arsenic	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> < 5.0 ppm	_____ to _____ ppm
Barium	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> < 100.0 ppm	_____ to _____ ppm
Cadmium	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> < 1.0 ppm	_____ to _____ ppm
Chromium (Total)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> < 5.0 ppm	_____ to _____ ppm
Lead	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> < 5.0 ppm	_____ to _____ ppm
Mercury	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> < 0.2 ppm	_____ to _____ ppm
Selenium	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 1.0 ppm	1.0 to 15 ppm
Silver	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> < 5.0 ppm	_____ to _____ ppm
Toxicity Characteristic Organics						
Benzene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____ to _____ ppm
Carbon tetrachloride	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____ to _____ ppm
Chlordane	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.03 ppm	_____ to _____ ppm
Chlorobenzene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 100.0 ppm	_____ to _____ ppm
Chloroform	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 6.0 ppm	_____ to _____ ppm
o - cresol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____ to _____ ppm
m - cresol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____ to _____ ppm
p - cresol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____ to _____ ppm
Cresol - mixed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____ to _____ ppm
2,4-D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 10.0 ppm	_____ to _____ ppm
1,4-Dichlorobenzene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 7.5 ppm	_____ to _____ ppm
1,2-Dichloroethane	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____ to _____ ppm
1,1-Dichloroethylene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.7 ppm	_____ to _____ ppm
2,4-Dinitrotoluene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.13 ppm	_____ to _____ ppm
Endrin	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.02 ppm	_____ to _____ ppm
Heptachlor (& its epoxide)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.008 ppm	_____ to _____ ppm
Hexachlorobenzene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.13 ppm	_____ to _____ ppm
Hexachlorobutadiene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____ to _____ ppm
Hexachloroethane	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 3.0 ppm	_____ to _____ ppm
Lindane	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.4 ppm	_____ to _____ ppm
Methoxychlor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 10.0 ppm	_____ to _____ ppm
Methyl ethyl ketone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____ to _____ ppm
Nitrobenzene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 2.0 ppm	_____ to _____ ppm
Pentachlorophenol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 100.0 ppm	_____ to _____ ppm
Pyridine	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 5.0 ppm	_____ to _____ ppm
Tetrachloroethylene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.7 ppm	_____ to _____ ppm
Toxaphene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____ to _____ ppm
Trichloroethylene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____ to _____ ppm
2,4,5-Trichlorophenol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 400.0 ppm	_____ to _____ ppm
2,4,6-Trichlorophenol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 2.0 ppm	_____ to _____ ppm
2,4,5-TP (Silvex)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 1.0 ppm	_____ to _____ ppm
Vinyl chloride	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.2 ppm	_____ to _____ ppm

WASTE PROFILE FORM

Attachment 2 - Wastewater Characteristics for RLWTF (TA-50 & TA-21)

For help in completing this section, call 7-4301.

Indicate if waste was: Accelerator produced Reactor produced Other (Describe in WPF Section 1 "Waste/Process Description.")

Radionuclide Contaminants

Identify for the following:	Present At Or Below LOC (in Ci/l)	Range if above LOC in Ci/l		Identify for the following:	Present At Or Below LOC (in Ci/l)	Range if above LOC in Ci/l	
		Min.	Max.			Min.	Max.
As-74	<input type="checkbox"/> ≤ 4.0 E -8	_____	_____	Rb-84	<input type="checkbox"/> ≤ 1.0 E -8	_____	_____
Be-7	<input type="checkbox"/> ≤ 1.0 E -6	_____	_____	Sc-46	<input type="checkbox"/> ≤ 2.0 E -8	_____	_____
Ce-141	<input type="checkbox"/> ≤ 5.0 E -8	_____	_____	Sc-48	<input type="checkbox"/> ≤ 2.0 E -8	_____	_____
Cs-134	<input type="checkbox"/> ≤ 2.0 E -9	_____	_____	Se-75	<input type="checkbox"/> ≤ 2.0 E -8	_____	_____
Cs-137	<input type="checkbox"/> ≤ 3.0 E -9	_____	_____	Na-22	<input type="checkbox"/> ≤ 1.0 E -8	_____	_____
Co-56	<input type="checkbox"/> ≤ 1.0 E -8	_____	_____	Sr-85	<input type="checkbox"/> ≤ 7.0 E -8	_____	_____
Co-57	<input type="checkbox"/> ≤ 1.0 E -7	_____	_____	Sr-89	<input type="checkbox"/> ≤ 2.0 E -8	_____	_____
Co-58	<input type="checkbox"/> ≤ 4.0 E -8	_____	_____	Sr-90	<input type="checkbox"/> ≤ 1.0 E -9	_____	_____
Co-60	<input type="checkbox"/> ≤ 5.0 E -9	_____	_____	Sn-113	<input type="checkbox"/> ≤ 5.0 E -8	_____	_____
Eu-152	<input type="checkbox"/> ≤ 2.0 E -8	_____	_____	V-48	<input type="checkbox"/> ≤ 2.0 E -8	_____	_____
H-3	<input type="checkbox"/> ≤ 2.0 E -8	_____	_____	Y-88	<input type="checkbox"/> ≤ 3.0 E -8	_____	_____
I-133	<input type="checkbox"/> ≤ 1.0 E -8	_____	_____	Zn-65	<input type="checkbox"/> ≤ 9.0 E -9	_____	_____
Mn-52	<input type="checkbox"/> ≤ 2.0 E -8	_____	_____	Am-241	<input type="checkbox"/> ≤ 0.1 E -6	_____	_____
Mn-54	<input type="checkbox"/> ≤ 5.0 E -8	_____	_____	Pu-238	<input type="checkbox"/> ≤ 0.1 E -6	_____	_____
Ra-226 + 228	<input type="checkbox"/> ≤ 3.0 E -11	_____	_____	Pu-239	<input type="checkbox"/> ≤ 0.1 E -6	1.0 E-5	2.5E-5
Rb-83	<input type="checkbox"/> ≤ 2.0 E -8	_____	_____	U-234	<input type="checkbox"/> ≤ 5.0 E -8	_____	_____
Others:		_____	_____	Others:		_____	_____

Other Contaminants

Metal Contaminants	Present Below LOC (in ppm)	Range if above LOC (in ppm)		Additional Contaminants	Min. / Max
		Min.	Max.		
Aluminum	<input type="checkbox"/> ≤ 5.0	_____	_____ ppm	Chemical Oxygen Demand (COD)	_____ to _____ mg/l
Boron	<input type="checkbox"/> ≤ 5.0	_____	_____ ppm	Total Suspended Solids (TSS)	_____ to _____ mg/l
Cobalt	<input type="checkbox"/> ≤ 1.0	_____	_____ ppm	<input type="checkbox"/> Total Nitrogen or (only one entry needed)	_____ to _____ mg/l
Copper	<input type="checkbox"/> ≤ 1.0	_____	_____ ppm	<input type="checkbox"/> Total Nitrates	_____ to _____ mg/l
Vanadium	<input type="checkbox"/> ≤ 0.10	_____	_____ ppm		
Zinc	<input type="checkbox"/> ≤ 95.40	_____	_____ ppm		

Radioactive Contaminant Totals:

Total Alpha 2.5E-5 Ci/l
Total Beta _____ Ci/l
Total Gamma _____ Ci/l

For TA-55 use only.

Wastewater will be discharged through one of the following:

Acid Line Caustic Line Industrial Waste Line

Yes No Scintillation Cocktail Brand Name _____ Volume _____ Unit _____

Yes No Chemical Treatment for Boilers / Water Chillers

Yes No Industrial Cleaner Type _____ Volume _____ Unit _____

Average daily volume when discharge occurs: 30 Gallons/day Liters/day

Maximum daily volume when discharge occurs: 30 Gallons/day Liters/day

Estimated number of days per year discharge will occur: 2

Estimated total volume per year discharged to the Radioactive Liquid Waste Collection System at TA-50 / TA-21: 60 Gallons Liters

EJM 01/13/03

Associated WPF Reference Number:

LDR and Underlying Hazardous Constituents Information - Identify presence of any constituents listed below.

Non-Wastewater / Wastewater Category - Check only one.

- Non Wastewater Wastewater [as defined by 40 CFR 268.2(f)]

Notification of California List Applicability - Check all that apply.

- Liquid** hazardous waste containing PCBs at a concentration of 50 ppm or greater.
 A D001 thru D043 **liquid** waste containing 134 mg/L or greater of Nickel and/or 130 mg/L or greater of thallium.
 A D001 thru D043 waste containing Halogenated Organic Compounds (HOCs) listed in 40 CFR 268, Appendix III, at 1000 ppm or greater.

Notification Of Underlying Hazardous Constituents

(Check the applicable underlying constituents above the concentration levels for D001 - D043 characteristic wastes only)

- No Underlying Hazardous Constituents in this waste stream.** **HAZCAT Meeting 40 CFR 268.42(c)**

Organic Constituents

- | | | |
|--|--|---|
| <input type="checkbox"/> A2213 | <input type="checkbox"/> Butyl benzyl phthalate | <input type="checkbox"/> p,p'-DDE |
| <input type="checkbox"/> Acenaphthylene | <input type="checkbox"/> 2-sec-Butyl-4,6-dinitrophenol (Dinoseb) | <input type="checkbox"/> o,p'-DDT |
| <input type="checkbox"/> Acenaphthene | <input type="checkbox"/> Carbaryl | <input type="checkbox"/> p,p'-DDT |
| <input type="checkbox"/> Acetone | <input type="checkbox"/> Carbenzadim | <input type="checkbox"/> Dibenz(a,h)anthracene |
| <input type="checkbox"/> Acetonitrile | <input type="checkbox"/> Carbofuran | <input type="checkbox"/> Dibenz(a,e)pyrene |
| <input type="checkbox"/> Acetophenone | <input type="checkbox"/> Carbofuran phenol | <input type="checkbox"/> 1,2-Dibromo-3-chloropropane |
| <input type="checkbox"/> 2-Acetyaminofluorene | <input type="checkbox"/> Carbon disulfide | <input type="checkbox"/> 1,2-Dibromoethane (Ethylene dibromide) |
| <input type="checkbox"/> Acrolein | <input type="checkbox"/> Carbon tetrachloride | <input type="checkbox"/> Dibromomethane |
| <input type="checkbox"/> Acrylamide | <input type="checkbox"/> Carbosulfan | <input type="checkbox"/> m-Dichlorobenzene |
| <input type="checkbox"/> Acrylonitrile | <input type="checkbox"/> Chlordane (alpha & gamma isomers) | <input type="checkbox"/> o-Dichlorobenzene |
| <input type="checkbox"/> Aldicarb sulfone | <input type="checkbox"/> p-Chloroaniline | <input type="checkbox"/> p-Dichlorobenzene |
| <input type="checkbox"/> Aldrin | <input type="checkbox"/> Chlorobenzene | <input type="checkbox"/> Dichlorodifluoromethane |
| <input type="checkbox"/> 4-Aminobiphenyl | <input type="checkbox"/> Chlorobenzilate | <input type="checkbox"/> 1,1-Dichloroethane |
| <input type="checkbox"/> Aniline | <input type="checkbox"/> 2-Chloro-1,3-butadiene | <input type="checkbox"/> 1,2-Dichloroethane |
| <input type="checkbox"/> Anthracene | <input type="checkbox"/> Chlorodibromomethane | <input type="checkbox"/> 1,1-Dichloroethylene |
| <input type="checkbox"/> Aramite | <input type="checkbox"/> Chloroethane | <input type="checkbox"/> trans-1,2-Dichloroethylene |
| <input type="checkbox"/> alpha-BHC | <input type="checkbox"/> bis(2-Chloroethoxy) methane | <input type="checkbox"/> 2,4-Dichlorophenol |
| <input type="checkbox"/> beta-BHC | <input type="checkbox"/> bis(2-Chloroethyl) ether | <input type="checkbox"/> 2,6-Dichlorophenol |
| <input type="checkbox"/> delta-BHC | <input type="checkbox"/> Chloroform | <input type="checkbox"/> 2,4-Dichlorophenoxyacetic acid (2,4-D) |
| <input type="checkbox"/> gamma-BHC | <input type="checkbox"/> bis(2-Chloroisopropyl) ether | <input type="checkbox"/> 1,2-Dichloropropane |
| <input type="checkbox"/> Barban | <input type="checkbox"/> p-Chloro-m-cresol | <input type="checkbox"/> cis-1,3-Dichloropropylene |
| <input type="checkbox"/> Bendiocarb | <input type="checkbox"/> 2-Chloroethyl vinyl ether | <input type="checkbox"/> trans-1,3-Dichloropropylene |
| <input type="checkbox"/> Bendiocarb phenol | <input type="checkbox"/> Chloromethane (Methyl chloride) | <input type="checkbox"/> Dieldrin |
| <input type="checkbox"/> Benomyl | <input type="checkbox"/> 2-Chloronaphthalene | <input type="checkbox"/> Diethylene glycol, dicarbamate |
| <input type="checkbox"/> Benzene | <input type="checkbox"/> 2-Chlorophenol | <input type="checkbox"/> Diethyl phthalate |
| <input type="checkbox"/> Benz(a)anthracene | <input type="checkbox"/> 1-Chloropropylene | <input type="checkbox"/> p-Dimethylaminoazobenzene |
| <input type="checkbox"/> Benzal chloride | <input type="checkbox"/> Chrysene | <input type="checkbox"/> 2,4-Dimethyl phenol |
| <input type="checkbox"/> Benzo(b)fluoranthene | <input type="checkbox"/> o-Cresol | <input type="checkbox"/> Dimethyl phthalate |
| <input type="checkbox"/> Benzo(k)fluoranthene | <input type="checkbox"/> m-Cresol | <input type="checkbox"/> Dimetilan |
| <input type="checkbox"/> Benzo(g,h,i)perylene | <input type="checkbox"/> p-Cresol | <input type="checkbox"/> Di-n-butyl phthalate |
| <input type="checkbox"/> Benzo(a)pyrene | <input type="checkbox"/> m-Cumenyl methylcarbamate | <input type="checkbox"/> 1,4-Dinitrobenzene |
| <input type="checkbox"/> Bromodichloromethane | <input type="checkbox"/> Cycloate | <input type="checkbox"/> 4,6-Dinitro-o-cresol |
| <input type="checkbox"/> Bromomethane (Methyl bromide) | <input type="checkbox"/> Cyclohexane | <input type="checkbox"/> 2,4-Dinitrophenol |
| <input type="checkbox"/> 4-Bromophenyl phenyl ether | <input type="checkbox"/> o,p'-DDD | <input type="checkbox"/> 2,4-Dinitrotoluene |
| <input type="checkbox"/> n-Butyl alcohol | <input type="checkbox"/> p,p'-DDD | <input type="checkbox"/> 2,6-Dinitrotoluene |
| <input type="checkbox"/> Butylate | <input type="checkbox"/> o,p'-DDE | <input type="checkbox"/> Di-n-octyl phthalate |

Land Disposal Restriction (LDR) and Underlying Hazardous Constituents Information Form

Notification Of Underlying Hazardous Constituents

(Check the applicable underlying constituents above the concentration levels for D001, D002, D003, and D012 - D043 characteristic wastes only)

Metal/Inorganic Constituents

Antimony

Arsenic

Barium

Beryllium

Cadmium

Chromium (Total)

Cyanides (Total)

Cyanides (Amenable)

Fluoride

Lead

Mercury (Retort residues)

Mercury - All others

Nickel

Selenium

Silver

Sulfide

Thallium

Vanadium

Zinc

REPORT #: 0000127

CHEMISTRY DIVISION
Actinide Analytical Chemistry Report

Page 2 of 2

Sample ID: 200149103 Group: NMT-15 QA: N Priority: 1
Submission ID: 100050077 Acct: Logged: 26-Jun-2002
User sample ID: SOLEDC4
Sample Type: AQUEOUS PROCESSING
Customer Cost Code: K24C00000000
Requester: JERRY LUGO MS: Phone:

Radioactive Elements: PU239
Radiation: Y

VOL OR WGT: 3.5 L

Analytical Operation: R5-WASTE Task ID: 300313116
Date Completed: 26-Jun-2002 00:00 Replicates: 1 Version: 1

Component	Results	Units
pH	11	pH
ACTIVITY	4.56E-06	Ci/L

Analyst: MAA

Approved by: Porterfield, Donovan R. 02-Jul-2002 11:23

Analytical Operation: PSSUR-L Task ID: 300314310
Date Completed: 15-Aug-2002 08:51 Replicates: 1 Version: 1

DESCRIPTION: PS-ELEMENTAL ANALYSIS IN LIQUIDS

Component	Result	Units	Component	Result	Units
SILVER	< 5	ug/ml	ARSENIC	<5	ug/ml
BARIUM	< 1	ug/ml	CADMIUM	< 1	ug/ml
CHROMIUM	4.4	ug/ml	MERCURY	< 0.1	ug/ml
LEAD	<5	ug/ml	SELENIUM	< 10	ug/ml
COMMENTS	[1]				

[1] COMMENTS: HG VALUES ARE FROM CVAF

Notebook Reference: IRIS080702A.RUN PG113 NMT1-0094 CVAF072402A.TXT PG201 ANC34
Additional Information:
Analyst: JBR/JM/DG/LRD

Approved by: Drake, Lawrence R. 15-Aug-2002 09:00

REPORT #: 0000124

CHEMISTRY DIVISION
Actinide Analytical Chemistry Report

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Sample ID: 200149102 Group: NMT-15 QA: N Priority: 1
Submission ID: 100050077 Acct: N Logged: 26-Jun-2002
User sample ID: SOLEDC3
Sample Type: AQUEOUS PROCESSING
Customer Cost Code: K24C00000000
Requester: JERRY LUGO MS: Phone:

Radioactive Elements: PU239
Radiation: Y

VOL OR WGT: 4 L

Analytical Operation: R5-WASTE Task ID: 300313115
Date Completed: 26-Jun-2002 00:00 Replicates: 1 Version: 1

Component	Results	Units
pH	14	pH
ACTIVITY	1.82E-06	Ci/L

Analyst: MAA

Approved by: Porterfield, Donivan R. 02-Jul-2002 11:22

Analytical Operation: PSSUR-L Task ID: 300314309
Date Completed: 15-Aug-2002 08:51 Replicates: 1 Version: 1

DESCRIPTION: PS-ELEMENTAL ANALYSIS IN LIQUIDS

Component	Result	Units	Component	Result	Units
SILVER	< 5	ug/ml	ARSENIC	< 5	ug/ml
BARIUM	< 1	ug/ml	CADMIUM	< 1	ug/ml
CHROMIUM	4.2	ug/ml	MERCURY	< 0.1	ug/ml
LEAD	<5	ug/ml	SELENIUM	< 10	ug/ml
COMMENTS	[1]				

[1] COMMENTS: HG VALUES ARE FROM CVAF

Notebook Reference: IRIS080702A.RUN PG113 NMT1-0094 CVAF072402A.TXT PG201 ANC34
Additional Information:
Analyst: JBR/JM/DG/LRD

Approved by: Drake, Lawrence R. 15-Aug-2002 08:59

REPORT #: 0000123

CHEMISTRY DIVISION
Actinide Analytical Chemistry Report

Page 2 of 2

Sample ID: 200149101 Group: NMT-15 QA: N Priority: 1
Submission ID: 100050077 Acct: N Logged: 26-Jun-2002
User sample ID: SOLEDC2
Sample Type: AQUEOUS PROCESSING
Customer Cost Code: K24C00000000
Requester: JERRY LUGO MS: Phone:

Radioactive Elements: PU239
Radiation: Y

VOL OR WGT: 4 L

Analytical Operation: R5-WASTE Task ID: 300313114
Date Completed: 26-Jun-2002 00:00 Replicates: 1 Version: 1

Component	Results	Units
-----	-----	-----
pH	14	pH
ACTIVITY	1.09E-05	Ci/L

Analyst: MAA

Approved by: Porterfield, Donivan R. 02-Jul-2002 11:21

Analytical Operation: PSSUR-L Task ID: 300314308
Date Completed: 15-Aug-2002 08:51 Replicates: 1 Version: 1

DESCRIPTION: PS-ELEMENTAL ANALYSIS IN LIQUIDS

Component	Result	Units	Component	Result	Units
-----	-----	-----	-----	-----	-----
SILVER	< 5	ug/ml	ARSENIC	<5	ug/ml
BARIUM	< 1	ug/ml	CADMIUM	< 1	ug/ml
CHROMIUM	4.9	ug/ml	MERCURY	< 0.1	ug/ml
LEAD	<5	ug/ml	SELENIUM	11	ug/ml
COMMENTS	[1]				

[1] COMMENTS: HG VALUES ARE FROM CVAF

Notebook Reference: IRIS080702A.RUN PG113 NMT1-0094 CVAF072402A.TXT PG201 ANC34
Additional Information:
Analyst: JBR/JM/DG/LRD

Approved by: Drake, Lawrence R. 15-Aug-2002 08:59

REPORT #: 0000121

CHEMISTRY DIVISION
Actinide Analytical Chemistry Report

Page 2 of 2

Sample ID: 200149100 Group: NMT-15 QA: N Priority: 1
Submission ID: 100050077 Acct: N Logged: 26-Jun-2002
User sample ID: SOLEDC1
Sample Type: AQUEOUS PROCESSING
Customer Cost Code: K24C00000000
Requester: JERRY LUGO MS: Phone:

Radioactive Elements: PU239
Radiation: Y

VOL OR WGT: 4 L

Analytical Operation: R5-WASTE Task ID: 300313113
Date Completed: 26-Jun-2002 00:00 Replicates: 1 Version: 1

Component	Results	Units
pH	14	pH
ACTIVITY	2.42E-05	Ci/L

Analyst: MAA

Approved by: Porterfield, Donivan R. 02-Jul-2002 11:20

Analytical Operation: PSSUR-L Task ID: 300314306
Date Completed: 15-Aug-2002 08:51 Replicates: 1 Version: 1

DESCRIPTION: PS-ELEMENTAL ANALYSIS IN LIQUIDS

Component	Result	Units	Component	Result	Units
SILVER	< 5	ug/ml	ARSENIC	<5	ug/ml
BARIUM	< 1	ug/ml	CADMIUM	< 1	ug/ml
CHROMIUM	< 1	ug/ml	MERCURY	< 0.1	ug/ml
LEAD	<5	ug/ml	SELENIUM	< 10	ug/ml
COMMENTS	[1]				

[1] COMMENTS: HG VALUES ARE FROM CVAF

Notebook Reference: IRIS080702A.RUN PG113 NMT1-0094 CVAF072402A.TXT PG201 ANC34
Additional Information:
Analyst: JBR/JM/DG/LRD

Approved by: Drake, Lawrence R. 15-Aug-2002 08:58

Analytical Chemistry Report
Task Report

Sample ID: 200148803 Group: NMT-15 QA: N Priority: 1
 Submission ID: 100050010 Acct: N Logged: 04-Jun-2002
 User sample ID: SOLEDC176
 Sample Type: AQUEOUS PROCESSING
 Customer Cost Code: KM9810020000
 Requester: JERRY L. LUGO MS: Phone:

Radioactive Elements: PU239
 Radiation: Y

VOL OR WGT: 5L

Approved by: Drake, Lawrence R. 18-Jun-2002 06:23

Analytical Operation: PSSUR-L Task ID: 300312011
 Date Completed: 18-Jun-2002 06:23 Replicates: 1 Version: 1

DESCRIPTION: PS-ELEMENTAL ANALYSIS IN LIQUIDS

Component	Result	Units	Component	Result	Units
SILVER	< 1	ug/ml	ARSENIC	<5	ug/ml
BARIUM	< 0.1	ug/ml	CADMIUM	< 1	ug/ml
CHROMIUM	<5	ug/ml	MERCURY	< 0.1	ug/ml
LEAD	< 5	ug/ml	SELENIUM	<10	ug/ml
COMMENTS	[1]				

[1] COMMENTS: HG VALUES ARE FROM CVAF

Notebook Reference: IRIS061202A.RUN PG105 NMT1-0094 CVAF061202A.TXT PG298

Additional Information:

Analyst: JBR/JM/LRD

Approved by: Drake, Lawrence R. 18-Jun-2002 06:23

Analytical Chemistry Report
Task Report

Sample ID: 200148896 Group: NMT-15 QA: N Priority: 1
Submission ID: 100050022 Acct: N Logged: 06-Jun-2002
User sample ID: SOLEDC129
Sample Type: WALK-IN LIQUID
Customer Cost Code: 8J1500KM9810020000
Requester: JERRY L. LUGO MS: Phone:

Radiation: Y

Approved by: Drake, Lawrence R. 03-Jul-2002 11:52

Analytical Operation: PSSUR-L Task ID: 300312710
Date Completed: 03-Jul-2002 11:52 Replicates: 1 Version: 1

DESCRIPTION: PS-ELEMENTAL ANALYSIS IN LIQUIDS

Component	Result	Units	Component	Result	Units
SILVER	< 1	ug/ml	ARSENIC	< 5	ug/ml
BARIUM	< 0.1	ug/ml	CADMIUM	< 0.2	ug/ml
CHROMIUM	3.7	ug/ml	MERCURY	< 0.1	ug/ml
LEAD	< 4	ug/ml	SELENIUM	< 10	ug/ml

Notebook Reference: IRIS062102A PG106 NMT1-094 CVAF ANC34 PG299

Additional Information:

Analyst: Drake, Lawrence R.

Approved by: Drake, Lawrence R. 03-Jul-2002 11:52

Material Safety Data Sheet

Potassium Hydroxide Solutions 1 N and 0.1 N

ACC# 40145

Section 1 - Chemical Product and Company Identification

MSDS Name: Potassium Hydroxide Solutions 1 N and 0.1 N**Catalog Numbers:** S719793, SLN7120, SP208-500, SP208-500LC, SP214-1, XX71601LI**Synonyms:** None**Company Identification:**

Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410

For information, call: 201-796-7100**Emergency Number:** 201-796-7100**For CHEMTREC assistance, call:** 800-424-9300**For International CHEMTREC assistance, call:** 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
7732-18-5	Water	94.2-99.	231-791-2
1310-58-3	Potassium hydroxide	0.1-5.8	215-181-3

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: colorless liquid.

Danger! Causes eye burns. Causes digestive tract burns. Corrosive. Harmful if swallowed.
Causes skin burns. Causes respiratory tract burns.

Target Organs: Respiratory system, eyes, skin.**Potential Health Effects**

Eye: Causes severe eye burns. May cause irreversible eye injury. Contact may cause ulceration of the conjunctiva and cornea. Eye damage may be delayed.

Skin: Causes skin burns. May cause deep, penetrating ulcers of the skin.

Ingestion: Harmful if swallowed. May cause circulatory system failure. May cause perforation of the digestive tract. Causes severe digestive tract burns with abdominal pain, vomiting, and possible death.

Inhalation: Irritation may lead to chemical pneumonitis and pulmonary edema. Causes severe irritation of upper respiratory tract with coughing, burns, breathing difficulty, and possible coma.

Chronic: Prolonged or repeated skin contact may cause dermatitis. Prolonged or repeated eye contact may cause conjunctivitis.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Discard contaminated clothing in a manner which limits further exposure.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician: Treat symptomatically and supportively.

Antidote: None reported.

Section 5 - Fire Fighting Measures

General Information: Wear appropriate protective clothing to prevent contact with skin and eyes. Wear a self-contained breathing apparatus (SCBA) to prevent contact with thermal decomposition products. Use water with caution and in flooding amounts. Contact with moisture or water may generate sufficient heat to ignite nearby combustible materials.

Extinguishing Media: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

Flash Point: Not applicable.

Autoignition Temperature: Not applicable.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 3; Flammability: 0; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Neutralize spill with a weak acid such as vinegar or acetic acid. Avoid runoff into storm sewers and ditches which lead to waterways.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Do not allow water to get into the container because of violent reaction. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from strong acids.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Water	none listed	none listed	none listed
Potassium hydroxide	2 mg/m3 Ceiling	none listed	none listed

OSHA Vacated PELs: Water: No OSHA Vacated PELs are listed for this chemical. Potassium hydroxide: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: colorless

Odor: none reported

pH: 13.2-13.5

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point: Not available.

Decomposition Temperature: Not available.

Solubility: Completely soluble in water.

Specific Gravity/Density: 1.3

Molecular Formula: Mixture

Molecular Weight: Not available.

Section 10 - Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to Avoid: Excess heat.

Incompatibilities with Other Materials: Potassium hydroxide reacts with chlorine dioxide, nitrobenzene, nitromethane, nitrogen trichloride, peroxidized tetrahydrofuran, 2,4,6-trinitrotoluene, bromoform+ crown ethers, acids alcohols, sugars, germanium cyclopentadiene, maleic dicarbide. Corrosive to metals such as aluminum, tin, and zinc to cause formation of flammable hydrogen gas.

Hazardous Decomposition Products: Oxides of potassium.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:**CAS# 7732-18-5:** ZC0110000**CAS# 1310-58-3:** TT2100000**LD50/LC50:****CAS# 7732-18-5:**

Oral, rat: LD50 = >90 mL/kg;

CAS# 1310-58-3:

Draize test, rabbit, skin: 50 mg/24H Severe;

Oral, rat: LD50 = 273 mg/kg;

Carcinogenicity:**CAS# 7732-18-5:** Not listed by ACGIH, IARC, NTP, or CA Prop 65.**CAS# 1310-58-3:** Not listed by ACGIH, IARC, NTP, or CA Prop 65.**Epidemiology:** No data available.**Teratogenicity:** No data available.**Reproductive Effects:** No data available.**Mutagenicity:** No data available.**Neurotoxicity:** No data available.**Other Studies:**

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.**RCRA U-Series:** None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	POTASSIUM HYDROXIDE, SOLUTION	No information available.
Hazard Class:	8	
UN Number:	UN1814	
Packing Group:	II	

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 7732-18-5 is listed on the TSCA inventory.

CAS# 1310-58-3 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

CAS# 1310-58-3: 1000 lb final RQ; 454 kg final RQ

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 1310-58-3: immediate, reactive.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

CAS# 1310-58-3 is listed as a Hazardous Substance under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 7732-18-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 1310-58-3 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

C

Risk Phrases:

R 22 Harmful if swallowed.

R 35 Causes severe burns.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 7732-18-5: No information available.

CAS# 1310-58-3: 1

Canada - DSL/NDSL

CAS# 7732-18-5 is listed on Canada's DSL List.

CAS# 1310-58-3 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of E, D1B.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 1310-58-3 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information
--

MSDS Creation Date: 12/12/1997

Revision #7 Date: 3/16/2007

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.

**LOS ALAMOS NATIONAL LABORATORY
WASTE PROFILE SYSTEM**

WPF #: 36237

31-Jan-2008 11:48 AM

(Version: 2)

p.1

Generator :	TESCH, CHUCK	MS :	C919	PH :	6655602	Z#:	152599
WMC :	STADELMAIER, AL	MS :	C924	PH :	5056679746	Z#:	095169
Contact :							
RCRA Rev :	CORIZ MICHELLE L	MS :	J599	PH :	5056656411	Z#:	120950
Status :	VOID	Activation Date :	10/23/2003	Expiration Date:	10/23/2005		
Group :	ESA-TSE	TA :	21	Bldg :	000155	Room :	5501

You are required to keep a copy of the WPF(s) in your files for at least three years. This WPF(s) is valid for one year or as long as the composition of the waste you have characterized remains the same. Should your waste change, please submit a new WPF to Waste Acceptance Group.

Waste Accumu : **Less-than-90-days Storage Area Site ID# 2518**
 Method of Char : **Analysis/Documents Attached**
 Radiological Analysis Number: **ATTACHED**
 MSDS

Waste Type : **Process Waste/Spent Chemical/Other**
 Waste Classes: **RCA Waste - RCA Waste**
 RAD Waste - Radioactive-LL
 WW Info - RLWTF
 Classif/Sensi - N

Waste Category: **Inorganic**

Waste Sources : **Research/Development/Testing**

Waste Matrix : **Aqueous**

Matrix Type : **Homogeneous**

Process Desc :
 TRITIUM CONTAMINATED POTASSIUM HYDROXIDE

Waste Desc : **N/A**

Ignitability : **Not ignitable**

Corrosivity : **>= 12.5**

Reactivity : **Non-reactive**

Boiling Point : **Not applicable**

Toxicity Characteristic Metals: **N/A**

Toxicity Characteristic Organic Compounds: **N/A**

Additional Chemical Constituents and Contaminants:

CAS NO	Constituent	MIN	MAX	UOM
	POTASSIUM HYDROXIDE SOLUTION	99	100	%

Waste Water Characteristics for RLWTF

Waste Production: **Reactor produced**

Radionuclide Contaminants :

Contaminant	Limit	Min	Max	Unit	Method
H-3		0.0001	0.001	Ci/l	

LOS ALAMOS NATIONAL LABORATORY
WASTE PROFILE SYSTEM

WPF #: 36237

31-Jan-2008 11:48 AM

(Version: 2)

p.2

Total Beta: 3.00E-04 Ci/l

Maximum daily flow when discharge occurs: 0.5 GAL

Estimated number of days discharge will occur: 1

Estimated total volume per year discharged to the RLWC at TA-50: 0.5 GAL

LDR and Underlying Hazardous Constituents Information

Non-Wastewater/Wastewater Category: **Non Wastewater**

WASTE CHARACTERIZATION INFORMATION

Radioactivity Category : **RADIOACTIVE-LL**

RCRA Category : **HAZARDOUS WASTE**

Secondary Info : N/A

Waste Classification : **MIXED LOW-LEVEL WASTE**

Waste Acceptances : **TA-50 Acceptance**

EPA Hazardous Waste Code : **D002**

Notification Of Underlying Hazardous Constituents:

Constituents

No Underlying Hazardous Constituents in this waste stream

LOS ALAMOS NATIONAL LABORATORY
WASTE PROFILE SYSTEM

WPF #: 36237

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(Version: 2)

p.3

GWCP Information

Section 1 - Waste Prevention/Minimization (answer all questions)

Can hazard segregation, elimination, or material substitution be used?

Yes* No

Can any of the materials in the waste stream be recycled or reused

Yes* No

Has waste minimization been incorporated into procedures or other process controls?

Yes No

Can this waste be generated outside a RCA?

Yes* No N/A

*Provide Comment

Section 6 - Work Control Documentation (answer all questions)

Do the procedures for this process cover how to manage this waste?

Yes No (Provide comments)

Do the procedures for this process cover controls to prevent changes to waste constituents and concentrations or addition or removal of waste?

Yes No (Provide comments)

Section 7 - Package and Storage Control

Describe how the waste will be packaged in according to the applicable WAC:

Identify the storage management controls that will be used for this waste stream: (check all that apply)

- Tamper indication devices:
- Limited use locks with log-in for waste
- Locked cabinet or building
- Other (describe)

Section 8 - Waste Certification Statements (check only one)

- Waste appears to meet WAC chapter for:
- Waste needs exception/exemption for treatment, storage, or disposal at:
- Waste does not meet the criteria for any known TSDF, (DOE approval is required. Contact the Waste Management Program Office for assistance.)

Estimated Annual Volume (m3):

Contact (if other than given below)	For rapid processing, complete all sections in black or blue ink and mail to: EM-SWO at MS J595. For assistance with completing this form, call EM-SWO at 5-4000.	Reference Number 36237 (For EM-SWO use only.)
-------------------------------------	---	--

Generator's Z Number 152599	Waste Generator's Name (print) Chuck Tesch	WMC's Z Number 095169	WMC's Name (print) Albert Stadelmaier
Generator's Telephone 5-5602	Generator's Mail Stop C332	Waste Generating Group ESA-TSE	Waste Stream Technical Area 21
		Building 155	Room 5501

Waste Accumulation (Check only one.)	<input type="checkbox"/> Satellite Accumulation Area	Site no: _____
	<input checked="" type="checkbox"/> Less-than-90-days Storage Area	Site no: 5-20-03 2352
	<input type="checkbox"/> TSDF	Site no: _____
	<input type="checkbox"/> Universal Waste Storage Area	Site no: _____
	<input type="checkbox"/> None of the Above	
ER Use Only	<input type="checkbox"/> ER Site	PRS #: _____

Method of Characterization (Check as many as apply.) <input checked="" type="checkbox"/> Analysis/Documents Attached	<input type="checkbox"/> Chemical/Physical Analysis	Sample #: _____
	<input checked="" type="checkbox"/> Radiological Analysis	Sample #: Attached
	<input type="checkbox"/> PCB Analysis	Sample #: _____
	<input type="checkbox"/> Acceptable Knowledge Documentation	Documentation #: _____
	<input checked="" type="checkbox"/> MSDS	

Section 1 - Chemical and Physical Information

Waste Type (Check only one.)	Waste Category (Check as many as apply.)	Waste Source (Check only one.)	Waste Matrix (Check only one.)
<input type="checkbox"/> Unused/Unspent Chemical (Complete all sections as appropriate.) <input checked="" type="checkbox"/> Process Waste/Spent Chemical/ other (Complete all sections.) <input type="checkbox"/> Green is Clean Waste (Complete all sections as appropriate.)	<input checked="" type="checkbox"/> Inorganic <input type="checkbox"/> Organic Volatile Organics <input type="checkbox"/> < 500 ppm <input type="checkbox"/> ≥ 500 ppm <input type="checkbox"/> Solvent * <input type="checkbox"/> Degreaser * <input type="checkbox"/> Dioxin <input type="checkbox"/> Electroplating <input type="checkbox"/> Treated Hazardous waste residue <input type="checkbox"/> Explosive process <input type="checkbox"/> Infectious/Medical <input type="checkbox"/> Biological <input type="checkbox"/> Beryllium <input type="checkbox"/> Empty Container (See instructions) <input type="checkbox"/> Battery (See instructions) Asbestos <input type="checkbox"/> friable <input type="checkbox"/> non-friable PCB Source Concentration <input type="checkbox"/> PCB < 50 ppm <input type="checkbox"/> PCB ≥ 50 - < 500 ppm <input type="checkbox"/> PCB ≥ 500 ppm <input type="checkbox"/> Other (Describe below)	Routine Waste <input type="checkbox"/> Decon <input type="checkbox"/> Materials Processing/Production <input checked="" type="checkbox"/> Research/Development/Testing <input type="checkbox"/> Scheduled Maintenance <input type="checkbox"/> Housekeeping - Routine <input type="checkbox"/> Spill Cleanup - Routine <input type="checkbox"/> Sampling - Routine Monitoring <input type="checkbox"/> Other (Describe below) Non-routine Waste <input type="checkbox"/> Abatement <input type="checkbox"/> Construction/Upgrades <input type="checkbox"/> Demolition <input type="checkbox"/> Decon/Decom <input type="checkbox"/> Investigative Derived <input type="checkbox"/> Orphan/Legacy <input type="checkbox"/> Remediation/Restoration <input type="checkbox"/> Repacking (Secondary) <input type="checkbox"/> Unscheduled Maintenance <input type="checkbox"/> Housekeeping - Non-routine <input type="checkbox"/> Spill Cleanup - Non-routine <input type="checkbox"/> UST - Non-petroleum <input type="checkbox"/> UST - Petroleum <input type="checkbox"/> Other (Describe below)	Gas <input type="checkbox"/> ≤ 1.5 Atmospheres pressure <input type="checkbox"/> > 1.5 Atmospheres pressure <input type="checkbox"/> Liquefied compressed gas Liquid <input checked="" type="checkbox"/> Aqueous <input type="checkbox"/> Non-aqueous <input type="checkbox"/> Suspended Solids/ Aqueous <input type="checkbox"/> Suspended Solids/ Non-aqueous Solid <input type="checkbox"/> Powder/Ash <input type="checkbox"/> Solid <input type="checkbox"/> Sludge <input type="checkbox"/> Absorbed liquid
Waste Classes Radiological Information Was Waste Generated in a RCA? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Non-radioactive <input checked="" type="checkbox"/> Radioactive <input checked="" type="checkbox"/> Low-Level <input type="checkbox"/> Transuranic	* Concentrations 10% or greater before use.		Matrix Type (Check only one.) <input checked="" type="checkbox"/> Homogeneous <input type="checkbox"/> Heterogeneous (Describe below)
Wastewater Information <input type="checkbox"/> Wastewater for SWSC (TA-46) (Complete Attachment 1) <input checked="" type="checkbox"/> Wastewater for RLWTF (TA-50/TA-21) (Complete Attachment 2) <input type="checkbox"/> Wastewater for TA-16 (HE)			
Classification Information <input checked="" type="checkbox"/> Unclassified <input type="checkbox"/> Classified/Sensitive			

Waste/Process Description (Chemical formulas may be used in this field.)
 Tritium contaminated potassium hydroxide

WASTE PROFILE FORM

Section 2 - Characteristics

Ignitability (Check only one.)		Corrosivity (Check only one.)		Reactivity (Check as many as apply.)		Boiling Point (Check only one.)	
(°F)	(°C)	(pH)				(°F)	(°C)
<input type="checkbox"/> < 73	<input type="checkbox"/> < 22.8	<input type="checkbox"/> ≤ 2.0		<input type="checkbox"/> RCRA Unstable		<input type="checkbox"/> ≤ 95	<input type="checkbox"/> ≤ 35
<input type="checkbox"/> 73 - 99	<input type="checkbox"/> 22.8 - 37.2	<input type="checkbox"/> 2.1 - 4.0		<input type="checkbox"/> Water Reactive		<input type="checkbox"/> > 95	<input type="checkbox"/> > 35
<input type="checkbox"/> 100 - 139	<input type="checkbox"/> 37.8 - 59.4	<input type="checkbox"/> 4.1 - 6.0		<input type="checkbox"/> Cyanide Bearing (> 250 ppm)			
<input type="checkbox"/> 140 - 200	<input type="checkbox"/> 60.0 - 99.3	<input type="checkbox"/> 6.1 - 9.0		<input type="checkbox"/> Sulfide Bearing (> 500 ppm)			
<input type="checkbox"/> > 200	<input type="checkbox"/> > 99.3	<input type="checkbox"/> 9.1 - 12.4		<input type="checkbox"/> Pyrophoric			
<input type="checkbox"/> EPA Ignitable - Non-liquid		<input checked="" type="checkbox"/> ≥ 12.5		<input type="checkbox"/> Shock Sensitive			
<input type="checkbox"/> DOT Flammable Gas		<input type="checkbox"/> Liquid corrosive to steel		<input type="checkbox"/> Explosive - DOT Div. _____			
<input type="checkbox"/> DOT Oxidizer		<input type="checkbox"/> Non-aqueous		<input checked="" type="checkbox"/> Non-reactive		<input checked="" type="checkbox"/> Not applicable	
<input checked="" type="checkbox"/> Not ignitable							

Identify for all contaminants listed.	Characterization Method			Concentration of Contaminants			
	AK	TCLP	Total	None or Non-detect	Present Below Regulatory Limit	Above Regulatory Limit	
						Minimum	Maximum
Toxicity Characteristic Metals						(Concentration in ppm only)	
Arsenic	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 5.0 ppm	_____ to _____ ppm	
Barium	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 100.0 ppm	_____ to _____ ppm	
Cadmium	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 1.0 ppm	_____ to _____ ppm	
Chromium (Total)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 5.0 ppm	_____ to _____ ppm	
Lead	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 5.0 ppm	_____ to _____ ppm	
Mercury	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.2 ppm	_____ to _____ ppm	
Selenium	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 1.0 ppm	_____ to _____ ppm	
Silver	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 5.0 ppm	_____ to _____ ppm	
Toxicity Characteristic Organics							
Benzene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____ to _____ ppm	
Carbon tetrachloride	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____ to _____ ppm	
Chlordane	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.03 ppm	_____ to _____ ppm	
Chlorobenzene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 100.0 ppm	_____ to _____ ppm	
Chloroform	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 6.0 ppm	_____ to _____ ppm	
o - cresol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____ to _____ ppm	
m - cresol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____ to _____ ppm	
p - cresol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____ to _____ ppm	
Cresol - mixed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____ to _____ ppm	
2,4-D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 10.0 ppm	_____ to _____ ppm	
1,4-Dichlorobenzene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 7.5 ppm	_____ to _____ ppm	
1,2-Dichloroethane	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____ to _____ ppm	
1,1-Dichloroethylene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.7 ppm	_____ to _____ ppm	
2,4-Dinitrotoluene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.13 ppm	_____ to _____ ppm	
Endrin	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.02 ppm	_____ to _____ ppm	
Heptachlor (& its epoxide)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.008 ppm	_____ to _____ ppm	
Hexachlorobenzene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.13 ppm	_____ to _____ ppm	
Hexachlorobutadiene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____ to _____ ppm	
Hexachloroethane	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 3.0 ppm	_____ to _____ ppm	
Lindane	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.4 ppm	_____ to _____ ppm	
Methoxychlor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 10.0 ppm	_____ to _____ ppm	
Methyl ethyl ketone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm	_____ to _____ ppm	
Nitrobenzene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 2.0 ppm	_____ to _____ ppm	
Pentachlorophenol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 100.0 ppm	_____ to _____ ppm	
Pyridine	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 5.0 ppm	_____ to _____ ppm	
Tetrachloroethylene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.7 ppm	_____ to _____ ppm	
Toxaphene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____ to _____ ppm	
Trichloroethylene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm	_____ to _____ ppm	
2,4,5-Trichlorophenol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 400.0 ppm	_____ to _____ ppm	
2,4,6-Trichlorophenol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 2.0 ppm	_____ to _____ ppm	
2,4,5-TP (Silvex)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 1.0 ppm	_____ to _____ ppm	
Vinyl chloride	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.2 ppm	_____ to _____ ppm	

Attachment 1 - Wastewater Characteristics for SWSC (TA-46)

For help in completing this section, call ESH-18 at 7-4882. Identify presence of any constituents listed below.

Use of Acceptable Knowledge in lieu of analytical data must be pre-approved by ESH-18.

Microtox Analysis #: _____ NOTE: Microtox analysis **must be performed**. Contact JCI/ENV to schedule analysis.

Are there any detectable levels of gross Alpha, gross Beta, gross Gamma, and/or Tritium? No Yes

All methods of analysis must conform to those approved pursuant to 40 CFR 136 unless an alternative method has been approved by ESH-18.

All metal concentrations are for the dissolved fraction present in the sample unless otherwise indicated.

Flow Rate Parameters	<input type="checkbox"/> Flow Rate of 100 gallons/day or less			<input type="checkbox"/> Flow Rate of greater than 100 gallons/day		
	None/ Non-detect	Within Regulatory Limits	Above Limit	None/ Non-detect	Within Regulatory Limits	Above Limit
pH		<input type="checkbox"/> 5-11 SU	<input type="checkbox"/>		<input type="checkbox"/> 5-11 SU	<input type="checkbox"/>
Chemical Oxygen Demand (COD)		<input type="checkbox"/> ≤ 750 mg/l	<input type="checkbox"/>		<input type="checkbox"/> ≤ 500 mg/l	<input type="checkbox"/>
Microtox results (a)		<input type="checkbox"/> < 55% screen	<input type="checkbox"/>		<input type="checkbox"/> < 50% screen	<input type="checkbox"/>
(b)		<input type="checkbox"/> > 20% EC50	<input type="checkbox"/>		<input type="checkbox"/> > 25% EC50	<input type="checkbox"/>
Temperature		<input type="checkbox"/> ≤ 180 °F	<input type="checkbox"/>		<input type="checkbox"/> ≤ 140 °F	<input type="checkbox"/>
Cyanide (Total)	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 5.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 1.0 mg/l	<input type="checkbox"/>
Fluoride	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 200.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 50.0 mg/l	<input type="checkbox"/>
Iron	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 100.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 35.0 mg/l	<input type="checkbox"/>
Magnesium	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 100.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 50.0 mg/l	<input type="checkbox"/>
Manganese	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 5.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 1.0 mg/l	<input type="checkbox"/>
Metals (Total)	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 40.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 10.0 mg/l	<input type="checkbox"/>
Nickel	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 50.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ≤ 3.0 mg/l	<input type="checkbox"/>
Nitrogen (Total)	<input checked="" type="checkbox"/>	<input type="checkbox"/> ≤ 100.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ≤ 50.0 mg/l	<input type="checkbox"/>
Oil and Greases	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 100.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 50.0 mg/l	<input type="checkbox"/>
Phosphorus (Total)	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 100.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 50.0 mg/l	<input type="checkbox"/>
Silver	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 5.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 mg/l	<input type="checkbox"/>
Total Suspended Solids (TSS)	<input checked="" type="checkbox"/>	<input type="checkbox"/> ≤ 400.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ≤ 300.0 mg/l	<input type="checkbox"/>
Zinc	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 25.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 mg/l	<input type="checkbox"/>

Wastewater contaminants Identify for all constituents listed	None/Non-detect	Present within Regulatory Limits	Above Limit
Dissolved Aluminum	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 5.0 mg/l	<input type="checkbox"/>
Dissolved Arsenic	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.2 mg/l	<input type="checkbox"/>
Barium	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 100.0 mg/l	<input type="checkbox"/>
Beryllium	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 5.3 mg/l	<input type="checkbox"/>
Dissolved Boron	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 5.0 mg/l	<input type="checkbox"/>
Dissolved Cadmium	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.05 mg/l	<input type="checkbox"/>
Chlorine (Total Residual)	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 3.0 mg/l	<input type="checkbox"/>
Dissolved Chromium	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 1.0 mg/l	<input type="checkbox"/>
Dissolved Cobalt	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 1.0 mg/l	<input type="checkbox"/>
Dissolved Copper	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.5 mg/l	<input type="checkbox"/>
Dissolved Lead	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.1 mg/l	<input type="checkbox"/>
Total Mercury	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.01 mg/l	<input type="checkbox"/>
Molybdenum	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 75.0 mg/l	<input type="checkbox"/>
Polychlorinated Biphenyls (PCB)	<input checked="" type="checkbox"/>	None Detected	<input type="checkbox"/>
Dissolved Selenium	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.05 mg/l	<input type="checkbox"/>
Dissolved Vanadium	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.1 mg/l	<input type="checkbox"/>
Dissolved Zinc	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 25.0 mg/l	<input type="checkbox"/>

WASTE PROFILE FORM

Attachment 2 - Wastewater Characteristics for RLWTF (TA-50 & TA-21)

For help in completing this section, call 7-4301.

Indicate if waste was: <input type="checkbox"/> Accelerator produced <input checked="" type="checkbox"/> Reactor produced <input type="checkbox"/> Other (Describe in WPF Section 1 "Waste/Process Description.")							
Radionuclide Contaminants							
Identify for the following:	Present At Or Below LOC (in Ci/l)	Range if above LOC in Ci/l Min. / Max.		Identify for the following:	Present At Or Below LOC (in Ci/l)	Range if above LOC in Ci/l Min. / Max.	
As-74	<input type="checkbox"/> ≤ 4.0 E -8	_____	/	Rb-84	<input type="checkbox"/> ≤ 1.0 E -8	_____	/
Be-7	<input type="checkbox"/> ≤ 1.0 E -6	_____	/	Sc-46	<input type="checkbox"/> ≤ 2.0 E -8	_____	/
Ce-141	<input type="checkbox"/> ≤ 5.0 E -8	_____	/	Sc-48	<input type="checkbox"/> ≤ 2.0 E -8	_____	/
Cs-134	<input type="checkbox"/> ≤ 2.0 E -9	_____	/	Se-75	<input type="checkbox"/> ≤ 2.0 E -8	_____	/
Cs-137	<input type="checkbox"/> ≤ 3.0 E -9	_____	/	Na-22	<input type="checkbox"/> ≤ 1.0 E -8	_____	/
Co-56	<input type="checkbox"/> ≤ 1.0 E -8	_____	/	Sr-85	<input type="checkbox"/> ≤ 7.0 E -8	_____	/
Co-57	<input type="checkbox"/> ≤ 1.0 E -7	_____	/	Sr-89	<input type="checkbox"/> ≤ 2.0 E -8	_____	/
Co-58	<input type="checkbox"/> ≤ 4.0 E -8	_____	/	Sr-90	<input type="checkbox"/> ≤ 1.0 E -9	_____	/
Co-60	<input type="checkbox"/> ≤ 5.0 E -9	_____	/	Sn-113	<input type="checkbox"/> ≤ 5.0 E -8	_____	/
Eu-152	<input type="checkbox"/> ≤ 2.0 E -8	_____	/	V-48	<input type="checkbox"/> ≤ 2.0 E -8	_____	/
H-3	<input type="checkbox"/> ≤ 2.0 E -8	1.0 e-4	/	Y-88	<input type="checkbox"/> ≤ 3.0 E -8	_____	/
I-133	<input type="checkbox"/> ≤ 1.0 E -8	_____	/	Zn-65	<input type="checkbox"/> ≤ 9.0 E -9	_____	/
Mn-52	<input type="checkbox"/> ≤ 2.0 E -8	_____	/	Am-241	<input type="checkbox"/> ≤ 0.1 E -6	_____	/
Mn-54	<input type="checkbox"/> ≤ 5.0 E -8	_____	/	Pu-238	<input type="checkbox"/> ≤ 0.1 E -6	_____	/
Ra-226 + 228	<input type="checkbox"/> ≤ 3.0 E -11	_____	/	Pu-239	<input type="checkbox"/> ≤ 0.1 E -6	_____	/
Rb-83	<input type="checkbox"/> ≤ 2.0 E -8	_____	/	U-234	<input type="checkbox"/> ≤ 5.0 E -8	_____	/
Others:		_____	/	Others:		_____	/
		_____	/			_____	/
		_____	/			_____	/
Other Contaminants							
Metal Contaminants	Present Below LOC (in ppm)	Range if above LOC (in ppm) Min. / Max.		Additional Contaminants	Min. / Max		
Aluminum	<input type="checkbox"/> ≤ 5.0	_____	to _____	Chemical Oxygen Demand (COD)	_____	to _____	mg/l
Boron	<input type="checkbox"/> ≤ 5.0	_____	to _____	Total Suspended Solids (TSS)	_____	to _____	mg/l
Cobalt	<input type="checkbox"/> ≤ 1.0	_____	to _____	<input type="checkbox"/> Total Nitrogen or (only one entry needed)	_____	to _____	mg/l
Copper	<input type="checkbox"/> ≤ 1.0	_____	to _____	<input type="checkbox"/> Total Nitrates	_____	to _____	mg/l
Vanadium	<input type="checkbox"/> ≤ 0.10	_____	to _____				
Zinc	<input type="checkbox"/> ≤ 95.40	_____	to _____				
Radioactive Contaminant Totals:				For TA-55 use only. Wastewater will be discharged through one of the following:			
Total Alpha		_____ Ci/l		<input type="checkbox"/> Acid Line	<input type="checkbox"/> Caustic Line	<input type="checkbox"/> Industrial Waste Line	
Total Beta		.3 e-3 _____ Ci/l					
Total Gamma		_____ Ci/l					
<input type="checkbox"/> Yes	Scintillation Cocktail	Brand Name _____	Volume _____	Unit _____			
<input checked="" type="checkbox"/> No							
<input type="checkbox"/> Yes	Chemical Treatment for Boilers / Water Chillers						
<input checked="" type="checkbox"/> No							
<input type="checkbox"/> Yes	Industrial Cleaner	Type _____	Volume _____	Unit _____			
<input checked="" type="checkbox"/> No							
Average daily volume when discharge occurs:				<input type="checkbox"/> Gallons/day			
				<input type="checkbox"/> Liters/day			
Maximum daily volume when discharge occurs:				<input checked="" type="checkbox"/> Gallons/day			
				<input type="checkbox"/> Liters/day			
Estimated number of days per year discharge will occur:				1 time generation			
Estimated total volume per year discharged to the Radioactive Liquid Waste Collection System at TA-50 / TA-21:				.5 _____ <input checked="" type="checkbox"/> Gallons			
				<input type="checkbox"/> Liters			

Protocol #: 8 Name: 3H 1600CA 649473 16-May-2003 07:23
 Region A: LL-UL= 0.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
 Region B: LL-UL= 2.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
 Region C: LL-UL= 0.0- 0.0 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
 Time = 1.00 QIP = tSIE ES Terminator = Count
 Conventional DPM
 Slide 1 = 234231
 Fluorescence Correction On

S#	TIME	CPMA	CPMB	SIS	tSIE	DPM	FLAG
1	10.00	99.30	54.00	10.626	171.		B blank
2	1.00	15149.1	10198.9	9.999	336.	46639.5	St
3	1.00	314949.	252237.	13.355	531.	690064.	- 1ml pot hydroxide

314 uci/l

~ 1 liter

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE

Trade Name Electrolyte Solution, DF-E05, DF-E06, DF-E07, DF-E09
Manufacturer Delta F Corp., 4 Constitution Way, Woburn, MA
01801-1087, USA, Tel + 1-781-935-4600
Emergency Contact USA: 1-800-424-9300
International: 1-813-979-0626 (collect)

Supplier and contact in UK
(for use in the UK only)

2. COMPOSITION

<u>CAS #</u>	<u>Component</u>	<u>EC Code/class</u>	<u>Concentration</u>	<u>Risk Phrase</u>	<u>Risk Description</u>
1310-58-3	Potassium Hydroxide in aqueous solution	215-181-3 C	1N; 5.6%w/w	R35	Causes severe burns

3. HAZARDS IDENTIFICATION

Main Hazard Corrosive. Causes severe burns on contact with skin, eyes and mucous membrane

CERCLA Ratings (scale 0-3) Health = 3 Fire = 0 Reactivity = 1 Persistence = 0
NFPA Ratings (scale 0-4) Health = 3 Fire = 0 Reactivity = 1

Potential Health Effects:

Eye Contact Causes severe eye burns. May cause irreversible eye injury. Contact may cause ulceration of the conjunctiva and cornea. Eye damage may be delayed.

Skin Contact Causes skin burns. May cause deep, penetrating ulcers of the skin.

Ingestion May cause circulatory system failure. May cause perforation of the digestive tract. Causes severe digestive tract burns with abdominal pain, vomiting, and possible death.

Inhalation Inhalation under normal use would not be expected as this product is supplied as an aqueous solution and no hazardous vapors are emitted. Effects of inhalation are irritation which may lead to chemical pneumonitis and pulmonary edema. Causes severe irritation of upper respiratory tract with coughing, burns, breathing difficulty, and possible coma.

Chronic Prolonged or repeated skin contact may cause dermatitis. Prolonged or repeated eye contact may cause conjunctivitis.

4. FIRST-AID MEASURES

Skin Contact In case of skin contact, remove contaminated clothing and shoes immediately. Wash affected area with soap or mild detergent and large amounts of water for at least 15 minutes. Obtain medical attention immediately.

Eye Contact	If the substance has entered the eyes, wash out with plenty of water for at least 15 - 20 minutes, occasionally lifting the upper and lower lids. Obtain medical attention immediately.
Ingestion	If the chemical has been confined to the mouth, give large quantities of water as a mouthwash. Ensure the mouthwash has not been swallowed. If the chemical has been swallowed, do NOT induce vomiting. Give 470 - 950ml (2 - 4 cups) of water or milk. Never give anything by mouth to an unconscious person. Obtain medical attention immediately.
Inhalation	Inhalation under normal use would not be expected as this product is supplied as an aqueous solution and no hazardous vapors are emitted; however, if inhalation should somehow occur, remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical aid immediately.

5. FIRE FIGHTING MEASURES

Special Exposure Hazard	Not applicable
Extinguishing Media	Not Combustible. Select extinguishing media appropriate to the surrounding fire conditions.
Protective Equipment	Wear appropriate protective clothing to prevent contact with skin and eyes. Wear a self-contained breathing apparatus (SCBA) to prevent contact with thermal decomposition products.

6. ACCIDENTAL RELEASE MEASURES

Personal Protection	Use proper personal protective equipment as indicated in Section 8.
Leaks and Spills	Absorb spill with inert material (e.g., dry sand or earth), then place into a chemical waste container. Neutralize spill with a weak acid such as vinegar or acetic acid.
Clean-up Procedures	Wash the spillage site with large amounts of water.

7. HANDLING AND STORAGE

Handling Precautions	Complete eye and face protection, protective clothing, and appropriate gloves must be used. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Do not ingest or inhale.
Storage Precautions	Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from strong acids.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Personal Protection	
Eyes	Wear appropriate protective chemical safety goggles and face shield as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin	Wear appropriate gloves to prevent skin exposure.
Clothing	Wear appropriate protective clothing to prevent skin exposure.
Respirators	Not Applicable. Inhalation under normal use would not be expected as this product is supplied as an aqueous solution and no hazardous

vapors are emitted.

Airborne Exposure

This material is supplied as an aqueous solution and will not be present in the atmosphere in normal use.

Exposure Limits

Potassium Hydroxide
UK EH40, OEL (8hr TWA) 2mg/m³
NIOSH, (8hr TWA) 2mg/m³
ACGIH, Ceiling 2mg/m³
OSHA, not listed

9. Physical & Chemical Properties

Molecular Formula	KOH Mixture
Physical State	1N aqueous solution. Colorless, odorless
pH	Alkaline
Solubility	Completely soluble in water
Boiling Point	104.5 ^o C
Melting Point	-3.5 ^o C
Flash Point	Not applicable
Flammability	Not flammable
Explosion Limits	Not applicable
Specific Gravity	1.15
Vapor Pressure	16.1 mm Hg @ 20 ^o C

10. Stability & Reactivity

Chemical Stability	Stable
Conditions/Materials to Avoid	Incompatible materials, acids and metals
Incompatibilities with other Materials	Reacts with chlorine dioxide, nitrobenzene, nitromethane, nitrogen trichloride, peroxidized tetrahydrofuran, 2,4,6-trinitrotoluene, bromoform+ crown ethers, acids alcohols, sugars, germanium cyclopentadiene, maleic dicarbide. Corrosive to metals such as aluminum, tin, and zinc to cause formation of flammable hydrogen gas.
Hazardous Decomposition Products	Oxides of potassium
Hazardous Polymerization	Has not been reported

11. Toxicological Information

Toxicity (Potassium Hydroxide)	CAS# 1310-58-3: Oral, rat: LD50 = 273 mg/kg
Carcinogen Status	Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA

Potassium Hydroxide Solution is a severe eye, mucus membrane, and skin irritant.

12. Ecological Information

Mobility	Completely soluble in water
Degradability	Will degrade by reaction with carbon dioxide from the atmosphere to produce a non-hazardous product.
Accumulation	No
Ecotoxicity	Information not available. No long-term effects expected due to

degradation. The preparation is already in dilute solution and adverse aquatic effects are not expected due to further dilution. The preparation is corrosive, and direct contact with fauna will cause burns.

13. Disposal Considerations

Waste Disposal Dispose of in a manner consistent with federal, state, and local regulations.

14. Transportation Information

	<u>Shipping Name</u>	<u>Hazard Class</u>	<u>UN Number</u>	<u>Packaging Group</u>
US DOT	Potassium Hydroxide Solution	8	UN1814	II
IATA	Potassium Hydroxide Solution	8	UN1814	II
ADR/RID	Potassium Hydroxide Solution	8	UN1814	II
IMDG Code	Potassium Hydroxide Solution	8	UN1814	II
Canadian TDG	Potassium Hydroxide Solution	8(9.2)	UN1814	Not Available

15. Regulatory Information

European/International Regulations
European Labeling in Accordance with EC Directives

Classification	Corrosive	
Hazard Symbol	C	
EC Number	215-181-3	
Risk Phrases	R35	Causes severe burns.
Safety Phrases	S1/2	Keep locked up and out of reach of children.
	S26	In case of contact with the eyes, rinse immediately with plenty of water and seek medical advice.
	S36	Wear suitable protective clothing.
	S37/39	Wear suitable gloves and eye/face protection.
	S45	In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).

16. Other Information

MSDS Creation Date: 09/30/94

MSDS Revised: 09/24/98

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information. Liability is expressly disclaimed for loss or injury arising out of use of this information or the use of any materials designated. Users should make their own investigation to determine the suitability of the information for their particular purpose.

Form WX-3-57
Rev 1/15/73

ESA-WMM PRODUCTION CONTROL
PROCESS DELIVERY ORDER

Date: May 15, 2003 Task Order Number: A-46455-02

Deliver the following material located at: TA-16 Bldg 410 Attn: G.J. Maes/L. Walker

To: R. Vigil-D. Roybal/T. Harlow At: TA-16 Bldg 207

Special instructions Piece's were made under T.O. 46455

Package and deliver 1 " B" Charge made under 46455
Material is 900-24

SERIAL #
03-A39051-0002

Weight 20.5 lbs

CONTAINS:
 INERT
 HIGH EXPLOSIVES
 NUCLEAR MATERIAL
 SECRET RD

Received by: _____

Date: _____

Group _____

Delivered by: _____

Associated WPF Reference Number: 36237

LDR and Underlying Hazardous Constituents Information - Identify presence of any constituents listed below.

Non-Wastewater / Wastewater Category - Check only one.

Non Wastewater

Wastewater [as defined by 40 CFR 268.2(f)]

Notification of California List Applicability - Check all that apply.

Liquid hazardous waste containing PCBs at a concentration of 50 ppm or greater.

A D001 thru D043 liquid waste containing 134 mg/L or greater of Nickel and/or 130 mg/L or greater of thallium.

A D001 thru D043 waste containing Halogenated Organic Compounds (HOCs) listed in 40 CFR 268, Appendix III, at 1000 ppm or greater.

Notification Of Underlying Hazardous Constituents

(Check the applicable underlying constituents above the concentration levels for D001 - D043 characteristic wastes only)

No Underlying Hazardous Constituents in this waste stream.

HAZCAT Meeting 40 CFR 268.42(c)

Organic Constituents

- | | | |
|--|--|---|
| <input type="checkbox"/> A2213 | <input type="checkbox"/> Butyl benzyl phthalate | <input type="checkbox"/> p,p'-DDE |
| <input type="checkbox"/> Acenaphthylene | <input type="checkbox"/> 2-sec-Butyl-4,6-dinitrophenol (Dinoseb) | <input type="checkbox"/> o,p'-DDT |
| <input type="checkbox"/> Acenaphthene | <input type="checkbox"/> Carbaryl | <input type="checkbox"/> p,p'-DDT |
| <input type="checkbox"/> Acetone | <input type="checkbox"/> Carbenzadim | <input type="checkbox"/> Dibenz(h,h)anthracene |
| <input type="checkbox"/> Acetonitrile | <input type="checkbox"/> Carbofuran | <input type="checkbox"/> Dibenz(a,e)pyrene |
| <input type="checkbox"/> Acetophenone | <input type="checkbox"/> Carbofuran phenol | <input type="checkbox"/> 1,2-Dibromo-3-chloropropane |
| <input type="checkbox"/> 2-Acetylaminofluorene | <input type="checkbox"/> Carbon disulfide | <input type="checkbox"/> 1,2-Dibromoethane (Ethylene dibromide) |
| <input type="checkbox"/> Acrolein | <input type="checkbox"/> Carbon tetrachloride | <input type="checkbox"/> Dibromomethane |
| <input type="checkbox"/> Acrylamide | <input type="checkbox"/> Carbosulfan | <input type="checkbox"/> m-Dichlorobenzene |
| <input type="checkbox"/> Acrylonitrile | <input type="checkbox"/> Chlordane (alpha & gamma isomers) | <input type="checkbox"/> o-Dichlorobenzene |
| <input type="checkbox"/> Aldicarb sulfone | <input type="checkbox"/> p-Chloroaniline | <input type="checkbox"/> p-Dichlorobenzene |
| <input type="checkbox"/> Aldrin | <input type="checkbox"/> Chlorobenzene | <input type="checkbox"/> Dichlorodifluoromethane |
| <input type="checkbox"/> 4-Aminobiphenyl | <input type="checkbox"/> Chlorobenzilate | <input type="checkbox"/> 1,1-Dichloroethane |
| <input type="checkbox"/> Aniline | <input type="checkbox"/> 2-Chloro-1,3-butadiene | <input type="checkbox"/> 1,2-Dichloroethane |
| <input type="checkbox"/> Anthracene | <input type="checkbox"/> Chlorodibromomethane | <input type="checkbox"/> 1,1-Dichloroethylene |
| <input type="checkbox"/> Aramite | <input type="checkbox"/> Chloroethane | <input type="checkbox"/> trans-1,2-Dichloroethylene |
| <input type="checkbox"/> alpha-BHC | <input type="checkbox"/> bis(2-Chloroethoxy) methane | <input type="checkbox"/> 2,4-Dichlorophenol |
| <input type="checkbox"/> beta-BHC | <input type="checkbox"/> bis(2-Chloroethyl) ether | <input type="checkbox"/> 2,6-Dichlorophenol |
| <input type="checkbox"/> delta-BHC | <input type="checkbox"/> Chloroform | <input type="checkbox"/> 2,4-Dichlorophenoxyacetic acid (2,4-D) |
| <input type="checkbox"/> gamma-BHC | <input type="checkbox"/> bis(2-Chloroisopropyl) ether | <input type="checkbox"/> 1,2-Dichloropropane |
| <input type="checkbox"/> Barban | <input type="checkbox"/> p-Chloro-m-cresol | <input type="checkbox"/> cis-1,3-Dichloropropylene |
| <input type="checkbox"/> Bendiocarb | <input type="checkbox"/> 2-Chloroethyl vinyl ether | <input type="checkbox"/> trans-1,3-Dichloropropylene |
| <input type="checkbox"/> Bendiocarb phenol | <input type="checkbox"/> Chloromethane (Methyl chloride) | <input type="checkbox"/> Dieldrin |
| <input type="checkbox"/> Benomyl | <input type="checkbox"/> 2-Chloronaphthalene | <input type="checkbox"/> Diethylene glycol, dicarbonate |
| <input type="checkbox"/> Benzene | <input type="checkbox"/> 2-Chlorophenol | <input type="checkbox"/> Diethyl phthalate |
| <input type="checkbox"/> Benz(a)anthracene | <input type="checkbox"/> 1-Chloropropylene | <input type="checkbox"/> p-Dimethylaminoazobenzene |
| <input type="checkbox"/> Benzal chloride | <input type="checkbox"/> Chrysene | <input type="checkbox"/> 2,4-Dimethyl phenol |
| <input type="checkbox"/> Benzo(b)fluoranthene | <input type="checkbox"/> o-Cresol | <input type="checkbox"/> Dimethyl phthalate |
| <input type="checkbox"/> Benzo(k)fluoranthene | <input type="checkbox"/> m-Cresol | <input type="checkbox"/> Dimeilan |
| <input type="checkbox"/> Benzo(g,h,i)perylene | <input type="checkbox"/> p-Cresol | <input type="checkbox"/> Di-n-butyl phthalate |
| <input type="checkbox"/> Benzo(a)pyrene | <input type="checkbox"/> m-Cumonyl methylcarbamate | <input type="checkbox"/> 1,4-Dinitrobenzene |
| <input type="checkbox"/> Bromodichloromethane | <input type="checkbox"/> Cycloate | <input type="checkbox"/> 4,6-Dinitro-o-cresol |
| <input type="checkbox"/> Bromomethane (Methyl bromide) | <input type="checkbox"/> Cyclohexanone | <input type="checkbox"/> 2,4-Dinitrophenol |
| <input type="checkbox"/> 4-Bromophenyl phenyl ether | <input type="checkbox"/> o,p'-DDD | <input type="checkbox"/> 2,4-Dinitrotoluene |
| <input type="checkbox"/> n-Butyl alcohol | <input type="checkbox"/> p,p'-DDD | <input type="checkbox"/> 2,6-Dinitrotoluene |
| <input type="checkbox"/> Butylate | <input type="checkbox"/> o,p'-DDE | <input type="checkbox"/> Di-n-octyl phthalate |

Notification Of Underlying Hazardous Constituents

(Check the applicable underlying constituents above the concentration levels for D001 - D043 characteristic wastes only)

Organic Constituents - continued

- | | | |
|---|--|--|
| <input type="checkbox"/> Di-n-propylnitrosamine | <input type="checkbox"/> Methapyrilene | <input type="checkbox"/> Phorate |
| <input type="checkbox"/> 1,4-Dioxane | <input type="checkbox"/> Methiocarb | <input type="checkbox"/> Phthalic acid |
| <input type="checkbox"/> Diphenylamine | <input type="checkbox"/> Methionyl | <input type="checkbox"/> Phthalic anhydride |
| <input type="checkbox"/> Diphenylnitrosamine | <input type="checkbox"/> Methoxychlor | <input type="checkbox"/> Physostigmine |
| <input type="checkbox"/> 1,2-Diphenylhydrazine | <input type="checkbox"/> 3-Methylcholanthrene | <input type="checkbox"/> Physostigmine salicylate |
| <input type="checkbox"/> Disulfoton | <input type="checkbox"/> 4,4-Methylene bis(2-chloroaniline) | <input type="checkbox"/> Promecarb |
| <input type="checkbox"/> Dithiocarbamates (total) | <input type="checkbox"/> Methylene chloride | <input type="checkbox"/> Pronamide |
| <input type="checkbox"/> Endosulfan I | <input type="checkbox"/> Methyl ethyl ketone | <input type="checkbox"/> Propam |
| <input type="checkbox"/> Endosulfan II | <input type="checkbox"/> Methyl isobutyl ketone | <input type="checkbox"/> Propoxur |
| <input type="checkbox"/> Endosulfan sulfate | <input type="checkbox"/> Methyl methacrylate | <input type="checkbox"/> Prinsulfocarb |
| <input type="checkbox"/> Endrin | <input type="checkbox"/> Methyl methanesulfonate | <input type="checkbox"/> Pyrene |
| <input type="checkbox"/> Endrin aldehyde | <input type="checkbox"/> Methyl parathion | <input type="checkbox"/> Pyridine |
| <input type="checkbox"/> EPTC | <input type="checkbox"/> Metolcarb | <input type="checkbox"/> Salfrole |
| <input type="checkbox"/> Ethyl acetate | <input type="checkbox"/> Mexacarbate | <input type="checkbox"/> Silvex (2,4,5-TIP) |
| <input type="checkbox"/> Ethyl benzene | <input type="checkbox"/> Molinate | <input type="checkbox"/> 1,2,4,5-Tetrachlorobenzene |
| <input type="checkbox"/> Ethyl cyanide (Propanenitrile) | <input type="checkbox"/> Naphthalene | <input type="checkbox"/> Tetrachlorodibenzo-p-dioxins (TCDDs) |
| <input type="checkbox"/> Ethyl ether | <input type="checkbox"/> 2-Naphthylamine | <input type="checkbox"/> Tetrachlorodibenzofurans (TCDFs) |
| <input type="checkbox"/> bis(2-Ethylhexyl) phthalate | <input type="checkbox"/> o-Nitroaniline | <input type="checkbox"/> 1,1,1,2-Tetrachloroethane |
| <input type="checkbox"/> Ethyl methacrylate | <input type="checkbox"/> p-Nitroaniline | <input type="checkbox"/> 1,1,2,2-Tetrachloroethane |
| <input type="checkbox"/> Ethylene oxide | <input type="checkbox"/> Nitrobenzene | <input type="checkbox"/> Tetrachloroethylene |
| <input type="checkbox"/> Euphar | <input type="checkbox"/> 5-Nitro-o-toluidine | <input type="checkbox"/> 2,3,4,6-Tetrachlorophenol |
| <input type="checkbox"/> Fluoranthene | <input type="checkbox"/> o-Nitrophenol | <input type="checkbox"/> Thiocarb |
| <input type="checkbox"/> Fluorene | <input type="checkbox"/> p-Nitrophenol | <input type="checkbox"/> Thiophanate-methyl |
| <input type="checkbox"/> Formetanate hydrochloride | <input type="checkbox"/> N-Nitrosodichethylamine | <input type="checkbox"/> Tirpate |
| <input type="checkbox"/> Formparanate | <input type="checkbox"/> N-Nitrosodimethylamine | <input type="checkbox"/> Toluene |
| <input type="checkbox"/> Heptachlor | <input type="checkbox"/> N-Nitroso-di-n-butylamine | <input type="checkbox"/> Toxaphene |
| <input type="checkbox"/> Heptachlor epoxide | <input type="checkbox"/> N-Nitrosomethylolthylamine | <input type="checkbox"/> Triallate |
| <input type="checkbox"/> Hexachlorobenzene | <input type="checkbox"/> N-Nitrosomorpholine | <input type="checkbox"/> Tribromomethane (Bromofom) |
| <input type="checkbox"/> Hexachlorobutadiene | <input type="checkbox"/> N-Nitrosopiperidine | <input type="checkbox"/> 1,2,4-Trichlorobenzene |
| <input type="checkbox"/> Hexachlorocyclopentadiene | <input type="checkbox"/> N-Nitrosopyrrolidine | <input type="checkbox"/> 1,1,1-Trichloroethane |
| <input type="checkbox"/> Hexachlorodibenzo-p-dioxins (HxCDDs) | <input type="checkbox"/> Oxamyl | <input type="checkbox"/> 1,1,2-Trichloroethane |
| <input type="checkbox"/> Hexachlorodibenzo-furans (HxCDFs) | <input type="checkbox"/> Parathion | <input type="checkbox"/> Trichloroethylene |
| <input type="checkbox"/> Hexachloroethane | <input type="checkbox"/> PCBs (total) | <input type="checkbox"/> Trichloromono-fluoromethane |
| <input type="checkbox"/> Hexachloropropylene | <input type="checkbox"/> Pebulate | <input type="checkbox"/> 2,4,5-Trichlorophenol |
| <input type="checkbox"/> Indeno (1,2,3-c,d) pyrene | <input type="checkbox"/> Pentachlorobenzene | <input type="checkbox"/> 2,4,6-Trichlorophenol |
| <input type="checkbox"/> Iodomethane | <input type="checkbox"/> Pentachlorodibenzo-p-dioxins (PeCDDs) | <input type="checkbox"/> 2,4,5-Trichlorophenoxyacetic acid (2,4,5-T) |
| <input type="checkbox"/> 3-Iodo-2-propenyl n-butylcarbamate | <input type="checkbox"/> Pentachlorodibenzo-furans (PeCDFs) | <input type="checkbox"/> 1,2,3-Trichloropropane |
| <input type="checkbox"/> Isobutyl alcohol | <input type="checkbox"/> Pentachloroethane | <input type="checkbox"/> 1,1,2-Trichloro-1,2,2-trifluoroethane |
| <input type="checkbox"/> Isodrin | <input type="checkbox"/> Pentachloronitrobenzene | <input type="checkbox"/> Trichthylamine |
| <input type="checkbox"/> Isolan | <input type="checkbox"/> Pentachlorophenol | <input type="checkbox"/> tris-(2,3-Dibromopropyl) phosphate |
| <input type="checkbox"/> Isosalvole | <input type="checkbox"/> Phenacstin | <input type="checkbox"/> Vernolate |
| <input type="checkbox"/> Kepone | <input type="checkbox"/> Phenanthrene | <input type="checkbox"/> Vinyl chloride |
| <input type="checkbox"/> Methacrylonitrile | <input type="checkbox"/> Phenol | <input type="checkbox"/> Xylenes (total) |
| <input type="checkbox"/> Methanol | <input type="checkbox"/> o-Phenylenediamine | |

Notification Of Underlying Hazardous Constituents

(Check the applicable underlying constituents above the concentration levels for D001 - D043 characteristic wastes only)

Metal/Inorganic Constituents

- | | | |
|---|--|-----------------------------------|
| <input type="checkbox"/> Antimony | <input type="checkbox"/> Cyanides (Amenable) | Selenium |
| <input type="checkbox"/> Arsenic | <input type="checkbox"/> Fluoride | <input type="checkbox"/> Silver |
| <input type="checkbox"/> Barium | <input type="checkbox"/> Lead | <input type="checkbox"/> Sulfide |
| <input type="checkbox"/> Beryllium | <input type="checkbox"/> Mercury (Retort residues) | <input type="checkbox"/> Thallium |
| <input type="checkbox"/> Cadmium | <input type="checkbox"/> Mercury - All others | <input type="checkbox"/> Vanadium |
| <input type="checkbox"/> Chromium (Total) | <input type="checkbox"/> Nickel | <input type="checkbox"/> Zinc |
| <input type="checkbox"/> Cyanides (Total) | | |

WASTE PROFILE FORM

WPF #: 36237

(Version: 1)

14-Sep-2004 09:24 AM

Generator: TESCH, CHUCK ESA-TSE
WMC: STADELMAIER, AL FWO-SWO
FROM: FWO-SWO

MS : C348
MS : C924
MS : J595/5-4000

WASTE PROFILE (WPF) EXTENSION QUESTIONNAIRE

Our files indicate that your WPF#: 36237 was submitted approximately one year ago. Please review the attached copy and answer the following questions concerning your waste stream to determine whether to renew or void your WPF. Please return the completed questionnaire to FWO-SWO at the address listed below. If your waste stream remains the same, your WPF will be extended for another year. If the original generator is no longer with the generating group or generating this waste, a new WPF will need to be filled out with a new generator. Upon receipt of this questionnaire with a signed Extension Certification, we will send you a return receipt indicating that your WPF is valid for another year. If there are changes in your waste stream, a new WPF will need to be completed.

Are you currently producing the same type of waste as indicated on your WPF#: 36237

YES NO

If yes, please sign the Extension Certification below

If no, will you be producing the same type of waste in the near future?

YES NO

If yes, please sign the Extension Certification below

If no, will you be producing a different type of waste?

YES NO

If no, sign the Void Approval below to indicate that your WPF should be voided

If yes, please submit a new WPF, along with this memo. We will then void your previous WPF and process a new one

Extension Certification

I am producing or will produce the same type of waste as indicated in WPF# 36237

Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Extension->

Signed



Date

9/21/04

Void Approval

I will no longer be generating or will be producing a different type or composition (a new WPF will be submitted) of waste as indicated in WPF# 36237

Void->

Signed _____

Date _____

NOTE: PLEASE FOLD AND STAPLE THE FORM TO THE LINE BELOW AND RETURN TO ADDRESS PROVIDED

TO: FWO-SWO

MS: J595

PHONE: 5-4000



WASTE PROFILE FORM

WPF #: 36237

03-Oct-2005 09:00 AM

(Version: 2)

Generator: TESCH, CHUCK ESA-TSE MS: C348
WMC: STADELMAIER, AL NWIS-SWO MS: C924
FROM: NWIS-SWO MS: J595/5-4000

WASTE PROFILE (WPF) EXTENSION QUESTIONNAIRE

Our files indicate that your WPF#: 36237 was submitted approximately one year ago. Please review the attached copy and answer the following questions concerning your waste stream to determine whether to renew or void your WPF.

Please return the completed questionnaire to NWIS-SWO at the address listed below. If your waste stream remains the same, your WPF will be extended for another year. Upon receipt of this questionnaire with a signed Extension Certification, we will send you a return receipt indicating that your WPF is valid for another year. If there are changes in your waste stream, a new WPF will need to be completed.

Are you currently producing the same type of waste as indicated on your WPF# 36237

YES NO

If yes, please sign the Extension Certification below

If no, will you be producing the same type of waste in the near future?

YES NO

If yes, please sign the Extension Certification below

If no, will you be producing a different type of waste?

YES NO

If no, sign the Void Approval below to indicate that your WPF should be voided

If yes, please submit a new WPF, along with this memo. We will then void your previous WPF and process a new one

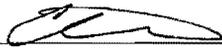
Extension Certification

I am producing or will produce the same type of waste as indicated in WPF# 36237. Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Extension-> Signed _____ Date _____

Void Approval

I will no longer be generating or will be producing a different type or composition (a new WPF will be submitted) of waste as indicated in WPF# 36237

Void-> Signed  Date 10/4/05

NOTE: PLEASE FOLD AND STAPLE THE FORM TO THE LINE BELOW AND RETURN TO ADDRESS PROVIDED

TO: NWIS-SWO

MS: J595

PHONE: 5-4000

**LOS ALAMOS NATIONAL LABORATORY
WASTE PROFILE SYSTEM**

WPF #: 36404

31-Jan-2008 11:49 AM

(Version: 4)

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Generator : **KOWALCZYK, CYNTHIA** MS : **E511** PH : **6651100** Z#: **150520**
 WMC : **MCCORMICK, EGAN** MS : **E507** PH : **5056678158** Z#: **093573**
 Contact :
 RCRA Rev : **LASH TAMMY A** MS : **J599** PH : **5056653454** Z#: **120424**
 Status : **ACTIVE** Activation Date : **10/22/2007** Expiration Date: **10/22/2008**
 Group : **NMT-2** TA : **55** Bldg : **000004** Room : **209,401,49**

You are required to keep a copy of the WPF(s) in your files for at least three years. This WPF(s) is valid for one year or as long as the composition of the waste you have characterized remains the same. Should your waste change, please submit a new WPF to Waste Acceptance Group.

Waste Accumu : **None of the Above Site ID#**
 Method of Char : **Chemical/Physical Analysis Number: ATTACHED**
Acceptable Knowledge Documentation Number: NMT2-HCP-001

Waste Type : **Process Waste/Spent Chemical/Other**
 Waste Classes: **RCA Waste - RCA Waste**
RAD Waste - Radioactive-TRU
WW Info - RLWTF
Classif/Sensi - N

Waste Category: **Inorganic**
Beryllium

Waste Sources : **Materials Processing/Production**

Waste Matrix : **Aqueous**

Matrix Type : **Homogeneous**

Process Desc :
 CAUSTIC FILTRATES FROM HYDROXIDE PRECIPITATION GENERATED UNDER NMT2-HCP-001, AQUEOUS CHLORIDE OPERATIONS, GENERATED HAS A COPY ON FILE. WPF #29309, WAS VOIDED BY CONNIE GERTH (8-25-1999). ACETIC ACID (< OR = TO 25%) USED TO KEEP THE LINE OPEN. WATER USED TO FLUSH THE LINE.

Waste Desc : **N/A**

Ignitability : **Not ignitable**

Corrosivity : **9.1 - 12.4**

Reactivity : **Non-reactive**

Boiling Point : **> 95 F > 35 C**

Toxicity Characteristic Metals:

Contaminant	Method	Limit	Min	Max	Unit
ARSENIC	TOTA		0	32	PPM
BARIUM	TOTA	Y	1	2	PPM
CADMIUM	TOTA	Y	1	10	PPM
CHROMIUM	TOTA	Y	0.01	1	PPM
LEAD	TOTA	Y			PPM
SILVER	TOTA	Y	1	10	PPM

**LOS ALAMOS NATIONAL LABORATORY
WASTE PROFILE SYSTEM**

WPF #: 36404

31-Jan-2008 11:49 AM

(Version: 4)

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Toxicity Characteristic Organic Compounds: N/A

Additional Chemical Constituents and Contaminants:

CAS NO	Constituent	MIN	MAX	UOM
7732-18-5	CAUSTIC FILTRATES	5	10	%
	WATER	80	99	%
	BERYLLIUM	0.000087	0.53	%

Additional Information: CAUSTIC FILTRATES INCLUDE: SODIUM HYDROXIDE; POTASSIUM HYDROXIDE; MAGNESIUM HYDROXIDE; SODIUM CHLORIDE; CALCIUM CHLORIDE; BROMOCRESOL PURPLE INDICATOR; OXALIC ACID; HYDROXYLAMINE HYDROCHLORIDE ACID AND NITRATES. Section 7: Secured Facility.

Waste Water Characteristics for RLWTF

Waste Production: Other

Radionuclide Contaminants :

Contaminant	Limit	Min	Max	Unit	Method
AM-241	0		0.0045	Ci/l	
PU-239	0		0.0045	Ci/l	

Metal Contaminants:

Contaminant	Limit	Min	Max	Unit	Method
ZINC		0	5000	ppm	

Additional Contaminants:

Contaminant	Limit	Min	Max	Unit	Method
TOTAL NITRATES		0	1000	mg/l	

Total Alpha: 4.50E-03 Ci/l

Average daily flow when discharge occurs: 100 LIT

Maximum daily flow when discharge occurs: 200 LIT

Estimated number of days discharge will occur: 40

Estimated total volume per year discharged to the RLWC at TA-50: 4000 LIT

Wastewater will be discharged through the following: CAUS Line

LDR and Underlying Hazardous Constituents Information

Non-Wastewater/Wastewater Category: **Non Wastewater**

WASTE CHARACTERIZATION INFORMATION

Radioactivity Category : **RADIOACTIVE-TRU**

RCRA Category : **HAZARDOUS WASTE**

Secondary Info : **BERYLLIUM**

Waste Classification : **MIXED TRANSURANIC WASTE**

Waste Acceptances : **TA-50 Acceptance**

EPA Hazardous Waste Code : **D004 D006 D011**

Notification Of Underlying Hazardous Constituents:

Constituents
Arsenic
Barium
Beryllium

LOS ALAMOS NATIONAL LABORATORY
WASTE PROFILE SYSTEM

WPF #: 36404

31-Jan-2008 11:49 AM

(Version: 4)

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Cadmium
Chromium (Total)
Lead
Nickel
Silver
Zinc

LOS ALAMOS NATIONAL LABORATORY
WASTE PROFILE SYSTEM

WPF #: 36404

31-Jan-2008 11:49 AM

(Version: 4)

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GWCP Information

Section 1 - Waste Prevention/Minimization (answer all questions)

Can hazard segregation, elimination, or material substitution be used?

Yes* No

Can any of the materials in the waste stream be recycled or reused

Yes* No

Has waste minimization been incorporated into procedures or other process controls?

Yes No

Can this waste be generated outside a RCA?

Yes* No N/A

*Provide Comment

Section 6 - Work Control Documentation (answer all questions)

Do the procedures for this process cover how to manage this waste?

Yes No (Provide comments)

Do the procedures for this process cover controls to prevent changes to waste constituents and concentrations or addition or removal of waste?

Yes No (Provide comments)

Section 7 - Package and Storage Control

Describe how the waste will be packaged in according to the applicable WAC:

WASTE TRAVELS TO TREATMENT FACILITY THROUGH HARD-PLUMBED LINES

Identify the storage management controls that will be used for this waste stream: (check all that apply)

- Tamper indication devices:
- Limited use locks with log-in for waste
- Locked cabinet or building
- Other (describe)

Section 8 - Waste Certification Statements (check only one)

Waste appears to meet WAC chapter for:

1.0

Waste needs exception/exemption for treatment, storage, or disposal at:

Waste does not meet the criteria for any known TSDF, (DOE approval is required. Contact the Waste Management Program Office for assistance.)

Estimated Annual Volume (m3): 18

RECEIVED JUL 07 2003

LOS ALAMOS
National Laboratory

WASTE PROFILE FORM

ORIGINAL

Contact (if other than given below)		For rapid processing, complete all sections in black or blue ink and mail to: EM-SWO at MS J595. For assistance with completing this form, call EM-SWO at 5-4000.			Reference Number 36404 (For EM-SWO use only.)	
Generator's Z Number	Waste Generator's Name (print)		WMC's Z Number	WMC's Name (print)		
104239	Louis D Schulte		093573	Egan McCormick		
Generator's Telephone	Generator's Mail Stop	Waste Generating Group	Waste Stream Technical Area	Building	Room	
665-1100	E511	NMT-2	TA-55	PF-4	209,401, 420 & 429	
Waste Accumulation (Check only one.)		<input type="checkbox"/> Satellite Accumulation Area <input type="checkbox"/> Less-than-90-days Storage Area <input type="checkbox"/> TSDF <input type="checkbox"/> Universal Waste Storage Area <input checked="" type="checkbox"/> None of the Above			Site no: _____ Site no: _____ Site no: _____	
ER Use Only		<input type="checkbox"/> ER Site			PRS #: _____	
Method of Characterization (Check as many as apply.)		<input checked="" type="checkbox"/> Chemical/Physical Analysis <input type="checkbox"/> Radiological Analysis <input type="checkbox"/> PCB Analysis <input checked="" type="checkbox"/> Acceptable Knowledge Documentation <input type="checkbox"/> MSDS			Sample #: <u>ATTACHED</u> Sample #: _____ Sample #: _____ Documentation #: <u>NMT2-HCP-001</u>	
<input type="checkbox"/> Analysis/Documents Attached						

Section 1 - Chemical and Physical Information

Waste Type (Check only one.)	Waste Category (Check as many as apply.)	Waste Source (Check only one.)	Waste Matrix (Check only one.)
<input type="checkbox"/> Unused/Unspent Chemical (Complete all sections as appropriate.) <input checked="" type="checkbox"/> Process Waste/Spent Chemical/other (Complete all sections.) <input type="checkbox"/> Green is Clean Waste (Complete all sections as appropriate.)	<input checked="" type="checkbox"/> Inorganic <input type="checkbox"/> Organic Volatile Organics <input type="checkbox"/> < 500 ppm <input type="checkbox"/> ≥ 500 ppm <input type="checkbox"/> Solvent * <input type="checkbox"/> Degreaser * <input type="checkbox"/> Dioxin <input type="checkbox"/> Electroplating <input type="checkbox"/> Treated Hazardous waste residue <input type="checkbox"/> Explosive process <input type="checkbox"/> Infectious/Medical <input type="checkbox"/> Biological <input type="checkbox"/> Beryllium <input type="checkbox"/> Empty Container (See instructions) <input type="checkbox"/> Battery (See instructions) Asbestos <input type="checkbox"/> friable <input type="checkbox"/> non-friable PCB Source Concentration <input type="checkbox"/> PCB < 50 ppm <input type="checkbox"/> PCB ≥ 50 - < 500 ppm <input type="checkbox"/> PCB ≥ 500 ppm <input type="checkbox"/> Other (Describe below)	Routine Waste <input type="checkbox"/> Decon <input checked="" type="checkbox"/> Materials Processing/Production <input type="checkbox"/> Research/Development/Testing <input type="checkbox"/> Scheduled Maintenance <input type="checkbox"/> Housekeeping - Routine <input type="checkbox"/> Spill Cleanup - Routine <input type="checkbox"/> Sampling - Routine Monitoring <input type="checkbox"/> Other (Describe below) Non-routine Waste <input type="checkbox"/> Abatement <input type="checkbox"/> Construction/Upgrades <input type="checkbox"/> Demolition <input type="checkbox"/> Decon/Decom <input type="checkbox"/> Investigative Derived <input type="checkbox"/> Orphan/Legacy <input type="checkbox"/> Remediation/Restoration <input type="checkbox"/> Repacking (Secondary) <input type="checkbox"/> Unscheduled Maintenance <input type="checkbox"/> Housekeeping - Non-routine <input type="checkbox"/> Spill Cleanup - Non-routine <input type="checkbox"/> UST - Non-petroleum <input type="checkbox"/> UST - Petroleum <input type="checkbox"/> Other (Describe below)	Gas <input type="checkbox"/> ≤ 1.5 Atmospheres pressure <input type="checkbox"/> > 1.5 Atmospheres pressure <input type="checkbox"/> Liquefied compressed gas Liquid <input checked="" type="checkbox"/> Aqueous <input type="checkbox"/> Non-aqueous <input type="checkbox"/> Suspended Solids/ Aqueous <input type="checkbox"/> Suspended Solids/ Non-aqueous Solid <input type="checkbox"/> Powder/Ash <input type="checkbox"/> Solid <input type="checkbox"/> Sludge <input type="checkbox"/> Absorbed liquid
Waste Classes Radiological Information Was Waste Generated in a RCA? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Non-radioactive <input checked="" type="checkbox"/> Radioactive <input type="checkbox"/> Low-Level <input checked="" type="checkbox"/> Transuranic			Matrix Type (Check only one.) <input checked="" type="checkbox"/> Homogeneous <input type="checkbox"/> Heterogeneous (Describe below)
Wastewater Information <input type="checkbox"/> Wastewater for SWSC (TA-46) (Complete Attachment 1) <input checked="" type="checkbox"/> Wastewater for RLWTF (TA-50/TA-21) (Complete Attachment 2) <input type="checkbox"/> Wastewater for TA-16 (HE)			
Classification Information <input checked="" type="checkbox"/> Unclassified <input type="checkbox"/> Classified/Sensitive			

Waste/Process Description (Chemical formulas may be used in this field.)
 Caustic Filtrates from hydroxide precipitation generated under NMT2-HCP-001, Aqueous Chloride Operations, generator has a copy on file. WPF # 29309, was voided by Connie Gerth (8-25-1999). Acetic acid (< or = to 25 %) used to keep the line open. Water used to flush the line.

WASTE PROFILE FORM

Section 2 - Characteristics							
Ignitability (Check only one.)		Corrosivity (Check only one.)		Reactivity (Check as many as apply.)		Boiling Point (Check only one.)	
(°F)	(°C)	(pH)				(°F)	(°C)
<input type="checkbox"/> < 73	< 22.8	<input type="checkbox"/> ≤ 2.0		<input type="checkbox"/> RCRA Unstable		<input type="checkbox"/> ≤ 95	≤ 35
<input type="checkbox"/> 73 - 99	22.8 - 37.2	<input type="checkbox"/> 2.1 - 4.0		<input type="checkbox"/> Water Reactive		<input checked="" type="checkbox"/> > 95	> 35
<input type="checkbox"/> 100 - 139	37.8 - 59.4	<input type="checkbox"/> 4.1 - 6.0		<input type="checkbox"/> Cyanide Bearing (> 250 ppm)			
<input type="checkbox"/> 140 - 200	60.0 - 99.3	<input type="checkbox"/> 6.1 - 9.0		<input type="checkbox"/> Sulfide Bearing (> 500 ppm)			
<input type="checkbox"/> > 200	> 99.3	<input checked="" type="checkbox"/> 9.1 - 12.4		<input type="checkbox"/> Pyrophoric			
<input type="checkbox"/> EPA Ignitable - Non-liquid		<input type="checkbox"/> ≥ 12.5		<input type="checkbox"/> Shock Sensitive			
<input type="checkbox"/> DOT Flammable Gas		<input type="checkbox"/> Liquid corrosive to steel		<input type="checkbox"/> Explosive - DOT Div. _____			
<input type="checkbox"/> DOT Oxidizer		<input type="checkbox"/> Non-aqueous		<input checked="" type="checkbox"/> Non-reactive		<input type="checkbox"/> Not applicable	
<input checked="" type="checkbox"/> Not ignitable							

Identify for all contaminants listed.	Characterization Method			Concentration of Contaminants			
	AK	TCLP	Total	None or Non-detect	Present Below Regulatory Limit	Above Regulatory Limit Minimum Maximum	
Toxicity Characteristic Metals						(Concentration in ppm only.)	
Arsenic	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 ppm	0	32 ppm
Barium	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> < 100.0 ppm		
Cadmium	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> < 1.0 ppm		
Chromium (Total)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> < 5.0 ppm		
Lead	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> < 5.0 ppm		
Mercury	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 0.2 ppm		
Selenium	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 1.0 ppm		
Silver	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> < 5.0 ppm		
Toxicity Characteristic Organics							
Benzene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm		
Carbon tetrachloride	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm		
Chlordane	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.03 ppm		
Chlorobenzene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 100.0 ppm		
Chloroform	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 6.0 ppm		
o - cresol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm		
m - cresol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm		
p - cresol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm		
Cresol - mixed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm		
2,4-D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 10.0 ppm		
1,4-Dichlorobenzene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 7.5 ppm		
1,2-Dichloroethane	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm		
1,1-Dichloroethylene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.7 ppm		
2,4-Dinitrotoluene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.13 ppm		
Endrin	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.02 ppm		
Heptachlor (& its epoxide)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.008 ppm		
Hexachlorobenzene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.13 ppm		
Hexachlorobutadiene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm		
Hexachloroethane	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 3.0 ppm		
Lindane	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.4 ppm		
Methoxychlor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 10.0 ppm		
Methyl ethyl ketone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 200.0 ppm		
Nitrobenzene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 2.0 ppm		
Pentachlorophenol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 100.0 ppm		
Pyridine	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 ppm		
Tetrachloroethylene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.7 ppm		
Toxaphene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm		
Trichloroethylene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 ppm		
2,4,5-Trichlorophenol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 400.0 ppm		
2,4,6-Trichlorophenol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 2.0 ppm		
2,4,5-TP (Silvex)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 1.0 ppm		
Vinyl chloride	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.2 ppm		

WASTE PROFILE FORM

Attachment 1 - Wastewater Characteristics for SWSC (TA-46)

For help in completing this section, call ESH-18 at 7-4882. Identify presence of any constituents listed below.
Use of Acceptable Knowledge in lieu of analytical data must be pre-approved by ESH-18.

Microtox Analysis #: _____ NOTE: Microtox analysis must be performed. Contact JCI/ENV to schedule analysis.

Are there any detectable levels of gross Alpha, gross Beta, gross Gamma, and/or Tritium? No Yes

All methods of analysis must conform to those approved pursuant to 40 CFR 136 unless an alternative method has been approved by ESH-18.

All metal concentrations are for the dissolved fraction present in the sample unless otherwise indicated.

Flow Rate Parameters	<input type="checkbox"/> Flow Rate of 100 gallons/day or less			<input type="checkbox"/> Flow Rate of greater than 100 gallons/day		
	None/ Non-detect	Within Regulatory Limits	Above Limit	None/ Non-detect	Within Regulatory Limits	Above Limit
pH		<input type="checkbox"/> 5 -11 SU	<input type="checkbox"/>		<input type="checkbox"/> 5 -11 SU	<input type="checkbox"/>
Chemical Oxygen Demand (COD)		<input type="checkbox"/> ≤ 750 mg/l	<input type="checkbox"/>		<input type="checkbox"/> ≤ 500 mg/l	<input type="checkbox"/>
Microtox results (a)		<input type="checkbox"/> < 55% screen	<input type="checkbox"/>		<input type="checkbox"/> < 50% screen	<input type="checkbox"/>
(b)		<input type="checkbox"/> > 20% EC50	<input type="checkbox"/>		<input type="checkbox"/> > 25% EC50	<input type="checkbox"/>
Temperature		<input type="checkbox"/> ≤ 180 °F	<input type="checkbox"/>		<input type="checkbox"/> ≤ 140 °F	<input type="checkbox"/>
Cyanide (Total)	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 1.0 mg/l	<input type="checkbox"/>
Fluoride	<input type="checkbox"/>	<input type="checkbox"/> < 200.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 50.0 mg/l	<input type="checkbox"/>
Iron	<input type="checkbox"/>	<input type="checkbox"/> < 100.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 35.0 mg/l	<input type="checkbox"/>
Magnesium	<input type="checkbox"/>	<input type="checkbox"/> < 100.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 50.0 mg/l	<input type="checkbox"/>
Manganese	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 1.0 mg/l	<input type="checkbox"/>
Metals (Total)	<input type="checkbox"/>	<input type="checkbox"/> < 40.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 10.0 mg/l	<input type="checkbox"/>
Nickel	<input type="checkbox"/>	<input type="checkbox"/> < 50.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ≤ 3.0 mg/l	<input type="checkbox"/>
Nitrogen (Total)	<input type="checkbox"/>	<input type="checkbox"/> ≤ 100.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ≤ 50.0 mg/l	<input type="checkbox"/>
Oil and Greases	<input type="checkbox"/>	<input type="checkbox"/> < 100.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 50.0 mg/l	<input type="checkbox"/>
Phosphorus (Total)	<input type="checkbox"/>	<input type="checkbox"/> < 100.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 50.0 mg/l	<input type="checkbox"/>
Silver	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 mg/l	<input type="checkbox"/>
Total Suspended Solids (TSS)	<input type="checkbox"/>	<input type="checkbox"/> ≤ 400.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ≤ 300.0 mg/l	<input type="checkbox"/>
Zinc	<input type="checkbox"/>	<input type="checkbox"/> < 25.0 mg/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 mg/l	<input type="checkbox"/>

Wastewater contaminants Identify for all constituents listed	None/Non-detect	Present within Regulatory Limits	Above Limit
Dissolved Aluminum	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 mg/l	<input type="checkbox"/>
Dissolved Arsenic	<input type="checkbox"/>	<input type="checkbox"/> < 0.2 mg/l	<input type="checkbox"/>
Barium	<input type="checkbox"/>	<input type="checkbox"/> < 100.0 mg/l	<input type="checkbox"/>
Beryllium	<input type="checkbox"/>	<input type="checkbox"/> < 5.3 mg/l	<input type="checkbox"/>
Dissolved Boron	<input type="checkbox"/>	<input type="checkbox"/> < 5.0 mg/l	<input type="checkbox"/>
Dissolved Cadmium	<input type="checkbox"/>	<input type="checkbox"/> < 0.05 mg/l	<input type="checkbox"/>
Chlorine (Total Residual)	<input type="checkbox"/>	<input type="checkbox"/> < 3.0 mg/l	<input type="checkbox"/>
Dissolved Chromium	<input type="checkbox"/>	<input type="checkbox"/> < 1.0 mg/l	<input type="checkbox"/>
Dissolved Cobalt	<input type="checkbox"/>	<input type="checkbox"/> < 1.0 mg/l	<input type="checkbox"/>
Dissolved Copper	<input type="checkbox"/>	<input type="checkbox"/> < 0.5 mg/l	<input type="checkbox"/>
Dissolved Lead	<input type="checkbox"/>	<input type="checkbox"/> < 0.1 mg/l	<input type="checkbox"/>
Total Mercury	<input type="checkbox"/>	<input type="checkbox"/> < 0.01 mg/l	<input type="checkbox"/>
Molybdenum	<input type="checkbox"/>	<input type="checkbox"/> < 75.0 mg/l	<input type="checkbox"/>
Polychlorinated Biphenyls (PCB)	<input type="checkbox"/>	None Detected	<input type="checkbox"/>
Dissolved Selenium	<input type="checkbox"/>	<input type="checkbox"/> < 0.05 mg/l	<input type="checkbox"/>
Dissolved Vanadium	<input type="checkbox"/>	<input type="checkbox"/> < 0.1 mg/l	<input type="checkbox"/>
Dissolved Zinc	<input type="checkbox"/>	<input type="checkbox"/> < 25.0 mg/l	<input type="checkbox"/>

WASTE PROFILE FORM

Attachment 2 - Wastewater Characteristics for RLWTF (TA-50 & TA-21)

For help in completing this section, call 7-4301.

Indicate if waste was: Accelerator produced Reactor produced Other (Describe in WPF Section 1 "Waste/Process Description")

Radionuclide Contaminants

Identify for the following:	Present At Or Below LOC (in Ci/l)	Range if above LOC in Ci/l		Identify for the following:	Present At Or Below LOC (in Ci/l)	Range if above LOC in Ci/l	
		Min.	Max.			Min.	Max.
As-74	<input type="checkbox"/> ≤ 4.0 E -8	_____	/	Rb-84	<input type="checkbox"/> ≤ 1.0 E -8	_____	/
Be-7	<input type="checkbox"/> ≤ 1.0 E -6	_____	/	Sc-46	<input type="checkbox"/> ≤ 2.0 E -8	_____	/
Ce-141	<input type="checkbox"/> ≤ 5.0 E -8	_____	/	Sc-48	<input type="checkbox"/> ≤ 2.0 E -8	_____	/
Cs-134	<input type="checkbox"/> ≤ 2.0 E -9	_____	/	Sc-75	<input type="checkbox"/> ≤ 2.0 E -8	_____	/
Cs-137	<input type="checkbox"/> ≤ 3.0 E -9	_____	/	Na-22	<input type="checkbox"/> ≤ 1.0 E -8	_____	/
Co-56	<input type="checkbox"/> ≤ 1.0 E -8	_____	/	Sr-85	<input type="checkbox"/> ≤ 7.0 E -8	_____	/
Co-57	<input type="checkbox"/> ≤ 1.0 E -7	_____	/	Sr-89	<input type="checkbox"/> ≤ 2.0 E -8	_____	/
Co-58	<input type="checkbox"/> ≤ 4.0 E -8	_____	/	Sr-90	<input type="checkbox"/> ≤ 1.0 E -9	_____	/
Co-60	<input type="checkbox"/> ≤ 5.0 E -9	_____	/	Sn-113	<input type="checkbox"/> ≤ 5.0 E -8	_____	/
Eu-152	<input type="checkbox"/> ≤ 2.0 E -8	_____	/	V-48	<input type="checkbox"/> ≤ 2.0 E -8	_____	/
H-3	<input type="checkbox"/> ≤ 2.0 E -8	_____	/	Y-88	<input type="checkbox"/> ≤ 3.0 E -8	_____	/
I-133	<input type="checkbox"/> ≤ 1.0 E -8	_____	/	Zn-65	<input type="checkbox"/> ≤ 9.0 E -9	_____	/
Mn-52	<input type="checkbox"/> ≤ 2.0 E -8	_____	/	Am-241	<input type="checkbox"/> ≤ 0.1 E -6	0	/ 4.5 x 10 ⁻³
Mn-54	<input type="checkbox"/> ≤ 5.0 E -8	_____	/	Pu-238	<input type="checkbox"/> ≤ 0.1 E -6	_____	/
Ra-226 + 228	<input type="checkbox"/> ≤ 3.0 E -11	_____	/	Pu-239	<input type="checkbox"/> ≤ 0.1 E -6	0	/ 4.5 x 10 ⁻³
Rb-83	<input type="checkbox"/> ≤ 2.0 E -8	_____	/	U-234	<input type="checkbox"/> ≤ 5.0 E -8	_____	/
Others:		_____	/	Others:		_____	/
		_____	/			_____	/
		_____	/			_____	/

Other Contaminants

Metal Contaminants	Present Below LOC (in ppm)	Range if above LOC (in ppm)	Additional Contaminants	Min. / Max
Aluminum	<input type="checkbox"/> ≤ 5.0	_____ to _____ ppm	Chemical Oxygen Demand (COD)	_____ to _____ mg/l
Boron	<input type="checkbox"/> ≤ 5.0	_____ to _____ ppm	Total Suspended Solids (TSS)	_____ to _____ mg/l
Cobalt	<input type="checkbox"/> ≤ 1.0	_____ to _____ ppm	<input type="checkbox"/> Total Nitrogen or (only one entry needed)	_____ to _____ mg/l
Copper	<input type="checkbox"/> ≤ 1.0	_____ to _____ ppm	<input checked="" type="checkbox"/> Total Nitrates	0 to 1000 mg/l
Vanadium	<input type="checkbox"/> ≤ 0.10	_____ to _____ ppm		
Zinc	<input type="checkbox"/> ≤ 95.40	0 to 5000 ppm		

Radioactive Contaminant Totals:

Total Alpha 4.5 x 10⁻³ Ci/l
 Total Beta _____ Ci/l
 Total Gamma _____ Ci/l

For TA-55 use only.

Wastewater will be discharged through one of the following:

Acid Line Caustic Line Industrial Waste Line

Yes No Scintillation Cocktail Brand Name _____ Volume _____ Unit _____

Yes No Chemical Treatment for Boilers / Water Chillers

Yes No Industrial Cleaner Type _____ Volume _____ Unit _____

Average daily volume when discharge occurs: _____ 100 _____ Gallons/day Liters/day

Maximum daily volume when discharge occurs: _____ 200 _____ Gallons/day Liters/day

Estimated number of days per year discharge will occur: _____ 40 _____

Estimated total volume per year discharged to the Radioactive Liquid Waste Collection System at TA-50 / TA-21: _____ 4000 _____ Gallons Liters

Per WMC
2/15/07

Associated WPF Reference Number:

LDR and Underlying Hazardous Constituents Information Identify presence of any constituents listed below.

Non-Wastewater / Wastewater Category - Check only one.

Non Wastewater Wastewater [as defined by 40 CFR 268.2(f)]

Notification of California List Applicability - Check all that apply.

Liquid hazardous waste containing PCBs at a concentration of 50 ppm or greater.

A D001 thru D043 liquid waste containing 134 mg/L or greater of Nickel and/or 130 mg/L or greater of thallium.

A D001 thru D043 waste containing Halogenated Organic Compounds (HOCs) listed in 40 CFR 268, Appendix III, at 1000 ppm or greater.

Notification Of Underlying Hazardous Constituents
(Check the applicable underlying constituents above the concentration levels for D001 - D043 characteristic wastes only)

No Underlying Hazardous Constituents in this waste stream. HAZCAT Meeting 40 CFR 268.42(c)

Organic Constituents

<input type="checkbox"/> A2213	<input type="checkbox"/> Butyl benzyl phthalate	<input type="checkbox"/> p,p'-DDE
<input type="checkbox"/> Acenaphthylene	<input type="checkbox"/> 2-sec-Butyl-4,6-dinitrophenol (Dinoseb)	<input type="checkbox"/> o,p'-DDT
<input type="checkbox"/> Acenaphthene	<input type="checkbox"/> Carbaryl	<input type="checkbox"/> p,p'-DDT
<input type="checkbox"/> Acetone	<input type="checkbox"/> Carbenzadim	<input type="checkbox"/> Dibenz(a,h)anthracene
<input type="checkbox"/> Acetonitrile	<input type="checkbox"/> Carbofuran	<input type="checkbox"/> Dibenz(a,e)pyrene
<input type="checkbox"/> Acetophenone	<input type="checkbox"/> Carbofuran phenol	<input type="checkbox"/> 1,2-Dibromo-3-chloropropane
<input type="checkbox"/> 2-Acetyaminofluorene	<input type="checkbox"/> Carbon disulfide	<input type="checkbox"/> 1,2-Dibromoethane (Ethylene dibromide)
<input type="checkbox"/> Acrolein	<input type="checkbox"/> Carbon tetrachloride	<input type="checkbox"/> Dibromomethane
<input type="checkbox"/> Acrylamide	<input type="checkbox"/> Carbosulfan	<input type="checkbox"/> m-Dichlorobenzene
<input type="checkbox"/> Acrylonitrile	<input type="checkbox"/> Chlordane (alpha & gamma isomers)	<input type="checkbox"/> o-Dichlorobenzene
<input type="checkbox"/> Aldicarb sulfone	<input type="checkbox"/> p-Chloroaniline	<input type="checkbox"/> p-Dichlorobenzene
<input type="checkbox"/> Aldrin	<input type="checkbox"/> Chlorobenzene	<input type="checkbox"/> Dichlorodifluoromethane
<input type="checkbox"/> 4-Aminobiphenyl	<input type="checkbox"/> Chlorobenzilate	<input type="checkbox"/> 1,1-Dichloroethane
<input type="checkbox"/> Aniline	<input type="checkbox"/> 2-Chloro-1,3-butadiene	<input type="checkbox"/> 1,2-Dichloroethane
<input type="checkbox"/> Anthracene	<input type="checkbox"/> Chlorodibromomethane	<input type="checkbox"/> 1,1-Dichloroethylene
<input type="checkbox"/> Aramite	<input type="checkbox"/> Chloroethane	<input type="checkbox"/> trans-1,2-Dichloroethylene
<input type="checkbox"/> alpha-BHC	<input type="checkbox"/> bis(2-Chloroethoxy) methane	<input type="checkbox"/> 2,4-Dichlorophenol
<input type="checkbox"/> beta-BHC	<input type="checkbox"/> bis(2-Chloroethyl) ether	<input type="checkbox"/> 2,6-Dichlorophenol
<input type="checkbox"/> delta-BHC	<input type="checkbox"/> Chloroform	<input type="checkbox"/> 2,4-Dichlorophenoxyacetic acid (2,4-D)
<input type="checkbox"/> gamma-BHC	<input type="checkbox"/> bis(2-Chloroisopropyl) ether	<input type="checkbox"/> 1,2-Dichloropropane
<input type="checkbox"/> Barban	<input type="checkbox"/> p-Chloro-m-cresol	<input type="checkbox"/> cis-1,3-Dichloropropylene
<input type="checkbox"/> Bendiocarb	<input type="checkbox"/> 2-Chloroethyl vinyl ether	<input type="checkbox"/> trans-1,3-Dichloropropylene
<input type="checkbox"/> Bendiocarb phenol	<input type="checkbox"/> Chloromethane (Methyl chloride)	<input type="checkbox"/> Dieldrin
<input type="checkbox"/> Benomyl	<input type="checkbox"/> 2-Chloronaphthalene	<input type="checkbox"/> Diethylene glycol, dicarbamate
<input type="checkbox"/> Benzene	<input type="checkbox"/> 2-Chlorophenol	<input type="checkbox"/> Diethyl phthalate
<input type="checkbox"/> Benz(a)anthracene	<input type="checkbox"/> 1-Chloropropylene	<input type="checkbox"/> p-Dimethylaminoazobenzene
<input type="checkbox"/> Benzal chloride	<input type="checkbox"/> Chrysene	<input type="checkbox"/> 2,4-Dimethyl phenol
<input type="checkbox"/> Benzo(b)fluoranthene	<input type="checkbox"/> o-Cresol	<input type="checkbox"/> Dimethyl phthalate
<input type="checkbox"/> Benzo(k)fluoranthene	<input type="checkbox"/> m-Cresol	<input type="checkbox"/> Dimetilan
<input type="checkbox"/> Benzo(g,h,i)perylene	<input type="checkbox"/> p-Cresol	<input type="checkbox"/> Di-n-butyl phthalate
<input type="checkbox"/> Benzo(a)pyrene	<input type="checkbox"/> m-Cumenyl methylcarbamate	<input type="checkbox"/> 1,4-Dinitrobenzene
<input type="checkbox"/> Bromodichloromethane	<input type="checkbox"/> Cycloate	<input type="checkbox"/> 4,6-Dinitro-o-cresol
<input type="checkbox"/> Bromomethane (Methyl bromide)	<input type="checkbox"/> Cyclohexanone	<input type="checkbox"/> 2,4-Dinitrophenol
<input type="checkbox"/> 4-Bromophenyl phenyl ether	<input type="checkbox"/> o,p'-DDD	<input type="checkbox"/> 2,4-Dinitrotoluene
<input type="checkbox"/> n-Butyl alcohol	<input type="checkbox"/> p,p'-DDD	<input type="checkbox"/> 2,6-Dinitrotoluene
<input type="checkbox"/> Butylate	<input type="checkbox"/> o,p'-DDE	<input type="checkbox"/> Di-n-octyl phthalate

Notification Of Underlying Hazardous Constituents

(Check the applicable underlying constituents above the concentration levels for D001 - D043 characteristic wastes only)

Organic Constituents - continued

- | | | |
|---|--|---|
| <input type="checkbox"/> Di-n-propylnitrosamine | <input type="checkbox"/> Methapyrilene | <input type="checkbox"/> Phorate |
| <input type="checkbox"/> 1,4-Dioxane | <input type="checkbox"/> Methiocarb | <input type="checkbox"/> Phthalic acid |
| <input type="checkbox"/> Diphenylamine | <input type="checkbox"/> Methomyl | <input type="checkbox"/> Phthalic anhydride |
| <input type="checkbox"/> Diphenylnitrosamine | <input type="checkbox"/> Methoxychlor | <input type="checkbox"/> Physostigmine |
| <input type="checkbox"/> 1,2-Diphenylhydrazine | <input type="checkbox"/> 3-Methylcholanthrene | <input type="checkbox"/> Physostigmine salicylate |
| <input type="checkbox"/> Disulfoton | <input type="checkbox"/> 4,4-Methylene bis(2-chloroaniline) | <input type="checkbox"/> Promecarb |
| <input type="checkbox"/> Dithiocarbamates (total) | <input type="checkbox"/> Methylene chloride | <input type="checkbox"/> Pronamide |
| <input type="checkbox"/> Endosulfan I | <input type="checkbox"/> Methyl ethyl ketone | <input type="checkbox"/> Propham |
| <input type="checkbox"/> Endosulfan II | <input type="checkbox"/> Methyl isobutyl ketone | <input type="checkbox"/> Propoxur |
| <input type="checkbox"/> Endosulfan sulfate | <input type="checkbox"/> Methyl methacrylate | <input type="checkbox"/> Prosulfocarb |
| <input type="checkbox"/> Endrin | <input type="checkbox"/> Methyl methansulfonate | <input type="checkbox"/> Pyrene |
| <input type="checkbox"/> Endrin aldehyde | <input type="checkbox"/> Methyl parathion | <input type="checkbox"/> Pyridine |
| <input type="checkbox"/> EPTC | <input type="checkbox"/> Metolcarb | <input type="checkbox"/> Saffrole |
| <input type="checkbox"/> Ethyl acetate | <input type="checkbox"/> Mexacarbate | <input type="checkbox"/> Silvex (2,4,5-TP) |
| <input type="checkbox"/> Ethyl benzene | <input type="checkbox"/> Molinate | <input type="checkbox"/> 1,2,4,5-Tetrachlorobenzene |
| <input type="checkbox"/> Ethyl cyanide (Propanenitrile) | <input type="checkbox"/> Naphthalene | <input type="checkbox"/> Tetrachlorodibenzo-p-dioxins (TCDDs) |
| <input type="checkbox"/> Ethyl ether | <input type="checkbox"/> 2-Naphthylamine | <input type="checkbox"/> Tetrachlorodibenzofurans (TCDFs) |
| <input type="checkbox"/> bis(2-Ethylhexyl) phthalate | <input type="checkbox"/> o-Nitroaniline | <input type="checkbox"/> 1,1,1,2-Tetrachloroethane |
| <input type="checkbox"/> Ethyl methacrylate | <input type="checkbox"/> p-Nitroaniline | <input type="checkbox"/> 1,1,2,2-Tetrachloroethane |
| <input type="checkbox"/> Ethylene oxide | <input type="checkbox"/> Nitrobenzene | <input type="checkbox"/> Tetrachloroethylene |
| <input type="checkbox"/> Famphur | <input type="checkbox"/> 5-Nitro-o-toluidine | <input type="checkbox"/> 2,3,4,6-Tetrachlorophenol |
| <input type="checkbox"/> Fluoranthene | <input type="checkbox"/> o-Nitrophenol | <input type="checkbox"/> Thiodicarb |
| <input type="checkbox"/> Fluorene | <input type="checkbox"/> p-Nitrophenol | <input type="checkbox"/> Thiophanate-methyl |
| <input type="checkbox"/> Formetanate hydrochloride | <input type="checkbox"/> N-Nitrosodiethylamine | <input type="checkbox"/> Tirpate |
| <input type="checkbox"/> Formparanate | <input type="checkbox"/> N-Nitrosodimethylamine | <input type="checkbox"/> Toluene |
| <input type="checkbox"/> Heptachlor | <input type="checkbox"/> N-Nitroso-di-n-butylamine | <input type="checkbox"/> Toxaphene |
| <input type="checkbox"/> Heptachlor epoxide | <input type="checkbox"/> N-Nitrosomethylethylamine | <input type="checkbox"/> Triallate |
| <input type="checkbox"/> Hexachlorobenzene | <input type="checkbox"/> N-Nitrosomorpholine | <input type="checkbox"/> Tribromomethane (Bromofom) |
| <input type="checkbox"/> Hexachlorobutadiene | <input type="checkbox"/> N-Nitrosopiperidine | <input type="checkbox"/> 1,2,4-Trichlorobenzene |
| <input type="checkbox"/> Hexachlorocyclopentadiene | <input type="checkbox"/> N-Nitrosopyrrolidine | <input type="checkbox"/> 1,1,1-Trichloroethane |
| <input type="checkbox"/> Hexachlorodibenzo-p-dioxins (HxCDDs) | <input type="checkbox"/> Oxamyl | <input type="checkbox"/> 1,1,2-Trichloroethane |
| <input type="checkbox"/> Hexachlorodibenzo-furans (HxCDFs) | <input type="checkbox"/> Parathion | <input type="checkbox"/> Trichloroethylene |
| <input type="checkbox"/> Hexachloroethane | <input type="checkbox"/> PCBs (total) | <input type="checkbox"/> Trichloromonofluoromethane |
| <input type="checkbox"/> Hexachloropropylene | <input type="checkbox"/> Pebulate | <input type="checkbox"/> 2,4,5-Trichlorophenol |
| <input type="checkbox"/> Indeno (1,2,3-c,d) pyrene | <input type="checkbox"/> Pentachlorobenzene | <input type="checkbox"/> 2,4,6-Trichlorophenol |
| <input type="checkbox"/> Iodomethane | <input type="checkbox"/> Pentachlorodibenzo-p-dioxins (PeCDDs) | <input type="checkbox"/> 2,4,5-Trichlorophenoxyacetic acid(2,4,5-T) |
| <input type="checkbox"/> 3-Iodo-2-propynyl n-butylcarbamate | <input type="checkbox"/> Penta chlorodibenzo-furans (PeCDFs) | <input type="checkbox"/> 1,2,3-Trichloropropane |
| <input type="checkbox"/> Isobutyl alcohol | <input type="checkbox"/> Pentachloroethane | <input type="checkbox"/> 1,1,2-Trichloro-1,2,2-trifluoroethane |
| <input type="checkbox"/> Isodrin | <input type="checkbox"/> Pentachloronitrobenzene | <input type="checkbox"/> Triethylamine |
| <input type="checkbox"/> Isolan | <input type="checkbox"/> Pentachlorophenol | <input type="checkbox"/> tris-(2,3-Dibromopropyl) phosphate |
| <input type="checkbox"/> Isosaffrole | <input type="checkbox"/> Phenacetin | <input type="checkbox"/> Vernolate |
| <input type="checkbox"/> Kepone | <input type="checkbox"/> Phenanthrene | <input type="checkbox"/> Vinyl chloride |
| <input type="checkbox"/> Methacrylonitrile | <input type="checkbox"/> Phenol | <input type="checkbox"/> Xylenes (total) |
| <input type="checkbox"/> Methanol | <input type="checkbox"/> o-Phenylenediamine | |

Notification Of Underlying Hazardous Constituents

(Check the applicable underlying constituents above the concentration levels for D001 - D043 characteristic wastes only)

Metal/Inorganic Constituents

- | | | |
|--|--|--|
| <input type="checkbox"/> Antimony | <input type="checkbox"/> Cyanides (Amenable) | <input type="checkbox"/> Selenium |
| <input checked="" type="checkbox"/> Arsenic | <input type="checkbox"/> Fluoride | <input type="checkbox"/> Silver |
| <input type="checkbox"/> Barium | <input checked="" type="checkbox"/> Lead | <input type="checkbox"/> Sulfide |
| <input checked="" type="checkbox"/> Beryllium | <input type="checkbox"/> Mercury (Retort residues) | <input type="checkbox"/> Thallium |
| <input type="checkbox"/> Cadmium | <input type="checkbox"/> Mercury - All others | <input type="checkbox"/> Vanadium |
| <input checked="" type="checkbox"/> Chromium (Total) | <input checked="" type="checkbox"/> Nickel | <input checked="" type="checkbox"/> Zinc |
| <input type="checkbox"/> Cyanides (Total) | | |

Waste Exception Form

WEF No. **36404**
WPF# WEF1

Completed by Waste Generator

<input checked="" type="checkbox"/> On-going <input type="checkbox"/> One-time	WPF No. OLD 29309	CWDR/TWSR No. NA	Item No. NA - RLWTF (TA-50) Liquid Waste
<input checked="" type="checkbox"/> Hazardous/Chemical <input type="checkbox"/> Low-Level Waste <input checked="" type="checkbox"/> Transuranic <input type="checkbox"/> Mixed Low-Level Waste <input checked="" type="checkbox"/> Radioactive Liquid Waste <input type="checkbox"/> Other _____			

Waste Acceptance Criteria [LANL WAC (Dec. 2002) - Liquid Radioactive Waste Treatment Facility, RLWTF]

- 1.4.4 Physical Characteristics: Volume requirements in Table 1.5 (50 - 250 gallons/discharge).
The maximum daily discharge for this effluent could be 200 liters/day or 52.84 gallons/day.
- 1.4.2 Chemical Waste: Table 1.3 requirements for Total Nitrates (10 mg/l), Zinc (100 mg/l) and Arsenic (<5 mg/l).
This effluent could have Total Nitrates (0 - 1000 mg/l), Zinc (0-5000 ppm or 5,500 mg/l, assuming solution density of 1.1) and Arsenic (0-32 ppm or 35.2 mg/l, assuming a solution density of 1.1).

Reason for Variance and Justification

Small Quantity (average daily volume: 100 liters/day), **Infrequent Generation** (40 days/ year), **Characteristic Waste**.

Waste Characteristics:
D004 - Arsenic, Characteristic Waste
Nitrates - (0 - 1000 mg/l)
Zinc - (0-5000 ppm)

Requested by (Print) <i>Louis Schulte</i>	Requested by (Signature) <i>Louis Schulte</i>	Z Number 104239	Date 6/25/03
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Waste Management Facility Approval

Special Instructions and Comments

- Notify RLWTF prior to discharge of this waste stream.
- Discharge to the TA-55 Caustic Waste Line

Basis for Exemption or Denial

<input checked="" type="checkbox"/> Approved <input type="checkbox"/> Rejected	Team Leader (Signature) <i>Wm Dan Mun</i>	Z Number 091973	Date 9/25/03
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WASTE PROFILE FORM

Contact (if other than given below) _____ For rapid processing, complete all sections in black or blue ink and mail to: **FWO-SWO at MS J595.** Reference Number **36404**
For assistance with completing this form, call FWO-SWO at 5-4000. (For FWO-SWO use only.)

Generator's Z Number 104239 150520	Waste Generator's Name (print) Schulte, Louis D. KOWALCZYK, CYNTHIA L	WMC's Z Number 093573	WMC's Name (print) McCormick, Egan
Generator's Telephone 6651100 667-7143	Generator's Mail Stop ES11	Waste Generating Group NMT-2	Waste Stream Technical Area 55
Building 000004	Room 209, 401, 40 420		

Waste Accumulation (Check only one)

<input type="checkbox"/>	Satellite Accumulation Area	Site no: _____
<input type="checkbox"/>	Less-than-90-days Storage Area	Site no: _____
<input type="checkbox"/>	TSDF	Site no: _____
<input type="checkbox"/>	Universal Waste Storage Area	Site no: _____
<input checked="" type="checkbox"/>	None of the Above	

ER Use Only: _____ ER Site: _____ PRS #: _____

Method of Characterization (Check as many as apply.)

<input checked="" type="checkbox"/>	Chemical/Physical Analysis	Sample #: ATTACHED
<input type="checkbox"/>	Radiological Analysis	Sample #: _____
<input type="checkbox"/>	PCB Analysis	Sample #: _____
<input type="checkbox"/>	Acceptable Knowledge Documentation	Documentation #: NMT2-HCP-001
<input type="checkbox"/>	MSDS	

Analysis/Documents Attached: _____

Section 1 - Chemical and Physical Information

Waste Type (Check only one.)	Waste Category (Check as many as apply.)	Waste Source (Check only one.)	Waste Matrix (Check only one.)
<input type="checkbox"/> Unused/Unspent Chemical (Complete all sections as appropriate.) <input checked="" type="checkbox"/> Process Waste/Spent Chemical/ other (Complete all sections.) <input type="checkbox"/> Green is Clean Waste (Complete all sections as appropriate.) Waste Classes Radiological Information Was Waste Generated in a RCA <input checked="" type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> Non-radioactive <input checked="" type="checkbox"/> Radioactive <input type="checkbox"/> Low-Level <input checked="" type="checkbox"/> Transuranic Wastewater Information <input type="checkbox"/> Wastewater for SWSC (TA-46)(Complete Attachment 1) <input checked="" type="checkbox"/> Wastewater for RLWTF (TA50/TA21 Complete Attachment 2) <input type="checkbox"/> Wastewater for TA-16(HE) Classification Information <input checked="" type="checkbox"/> Unclassified <input type="checkbox"/> Classified/Sensitive	<input checked="" type="checkbox"/> Inorganic <input type="checkbox"/> Organic Volatile Organics <input type="checkbox"/> < 500 ppm <input type="checkbox"/> > = 500 ppm <input type="checkbox"/> Solvent * <input type="checkbox"/> Degreaser * <input type="checkbox"/> Dioxin <input type="checkbox"/> Electroplation <input type="checkbox"/> Treated Hazardous waste residue <input type="checkbox"/> Explosive process <input type="checkbox"/> Infectious/Medical <input type="checkbox"/> Biological <input type="checkbox"/> Beryllium <input type="checkbox"/> Empty Container(see instructions) <input type="checkbox"/> Battery(see instructions) Asbestos <input type="checkbox"/> friable <input type="checkbox"/> non-friable PCB Source Concentration <input type="checkbox"/> PCB < 50 ppm <input type="checkbox"/> PCB > = 50 - < 500 ppm <input type="checkbox"/> PCB > = 500 ppm <input type="checkbox"/> Other (Describe below) *Concentrations 10% or greater before use.	Routine Waste <input type="checkbox"/> Decon <input checked="" type="checkbox"/> Materials Processing/Production <input type="checkbox"/> Research/Development/Testing <input type="checkbox"/> Scheduled Maintenance <input type="checkbox"/> Housekeeping - Routine <input type="checkbox"/> Spill Cleanup - Routine <input type="checkbox"/> Sampling - Routine Monitoring <input type="checkbox"/> Other (Describe below) Non-routine Waste <input type="checkbox"/> Abatement <input type="checkbox"/> Construction/Upgrades <input type="checkbox"/> Demolition <input type="checkbox"/> Decon/Decom <input type="checkbox"/> Investigative Derived <input type="checkbox"/> Orphan/Legacy <input type="checkbox"/> Remediation/Restoration <input type="checkbox"/> Repacking (Secondary) <input type="checkbox"/> Unscheduled Maintenance <input type="checkbox"/> Housekeeping - Non-routine <input type="checkbox"/> Spill Cleanup - Non-routine <input type="checkbox"/> UST - Non-petroleum <input type="checkbox"/> UST - Petroleum <input type="checkbox"/> Other (Describe below)	Gas <input type="checkbox"/> < = 1.5 Atmospheres pressure <input type="checkbox"/> > 1.5 Atmospheres pressure <input type="checkbox"/> Liquefied compressed gas Liquid <input checked="" type="checkbox"/> Aqueous <input type="checkbox"/> Non-aqueous <input type="checkbox"/> Suspended Solids/Aqueous <input type="checkbox"/> Suspended Solids/Non-aqueous Solid <input type="checkbox"/> Powder/Ash <input type="checkbox"/> Solid <input type="checkbox"/> Sludge <input type="checkbox"/> Absorbed Liquid Matrix Type (check only one.) <input checked="" type="checkbox"/> Homogeneous <input type="checkbox"/> Heterogeneous (Describe below)

Waste/Process Description (Chemical formulas may be used in this field.)
CAUSTIC FILTRATES FROM HYDROXIDE PRECIPITATION GENERATED UNDER NMT2-HCP-001, AQUEOUS CHLORIDE OPERATIONS, GENERATED HAS A COPY ON FILE. WPF #29309, WAS VOIDED BY CONNIE GERTH (8-25-1999). ACETIC ACID (< OR = TO 25%) USED TO KEEP THE LINE OPEN. WATER USED TO FLUSH THE LINE.

WASTE PROFILE FORM

Reference Number
36404
(For FWO-SWO use only.)

Attachment 2 - Wastewater Characteristics for RLWTF (TA-50 & TA-21)

For help in completing this section, call 7-4301.

Indicate if waste was: Accelerator produced Reactor produced Other (Describe in WPF Section 1 "Waste/Process Description.")

Radionuclide Contaminants							
Identify for the following:	Present At Or Below LOC (in Ci/l)	Range if above LOC in Ci/l		Identify for the following:	Present At Or Below LOC (in Ci/l)	Range if above LOC in Ci/l	
		Min.	Max.			Min.	Max.
As-74	<= 4.0E-8		/	Rb-84	<= 1.0E-8		/
Be-7	<= 1.0E-6		/	Sc-46	<= 2.0E-8		/
Ce-141	<= 5.0E-8		/	Sc-48	<= 2.0E-8		/
Cs-134	<= 2.0E-9		/	Se-75	<= 2.0E-8		/
Cs-137	<= 3.0E-9		/	Na-22	<= 1.0E-8		/
Co-56	<= 1.0E-8		/	Sr-85	<= 7.0E-8		/
Co-57	<= 1.0E-7		/	Sr-89	<= 2.0E-8		/
Co-58	<= 4.0E-8		/	Sr-90	<= 1.0E-9		/
Co-60	<= 5.0E-9		/	Sn-113	<= 5.0E-8		/
Eu-152	<= 2.0E-8		/	V-48	<= 2.0E-8		/
H-3	<= 2.0E-8		/	Y-88	<= 3.0E-8		/
I-133	<= 1.0E-8		/	Zn-65	<= 9.0E-9		/
Mn-52	<= 2.0E-8		/	Am-241	<= 0.1E-6	0.00E+00	4.50E-03
Mn-54	<= 5.0E-8		/	Pu-238	<= 0.1E-6		/
Ra-226+228	<= 3.0E-11		/	Pu-239	<= 0.1E-6	0.00E+00	4.50E-03
Rb-83	<= 2.0E-8		/	U-234	<= 5.0E-8		/
Others:			/	Others:			/

Other Contaminants						
Metal Contaminants	Present Below LOC (in ppm)	Range if above LOC (in ppm)		Additional Contaminants	Min.	Max.
		Min.	Max.			
Aluminum	<= 5.0		to	Chemical Oxygen Demand (DOD)		mg/l
Boron	<= 5.0		to	Total Suspended Solids (TSS)		mg/l
Cobalt	<= 1.0		to	<input type="checkbox"/> Total Nitrogen or (only one entry needed) <input type="checkbox"/> Total Nitrates		mg/l
Copper	<= 1.0		to		0	1000
Vanadium	<= 0.10		to			
Zinc	<= 95.4	0	5000			

Radioactive Contaminant Totals:			For TA-55 use only	
Total Alpha	4.50E-03	Ci/l	Wastewater will be discharged through one of the following:	
Total Beta		Ci/l	<input type="checkbox"/> Acid Line	<input checked="" type="checkbox"/> Caustic Line
Total Gamma		Ci/l		<input type="checkbox"/> Industrial Waste Line

<input type="checkbox"/> Yes	Scintillation Cocktail	Brand Name	Volume	Unit
<input type="checkbox"/> No				
<input type="checkbox"/> Yes	Chemical Treatment for Boilers/Water Chillers			
<input type="checkbox"/> No				
<input type="checkbox"/> Yes	Industrial Cleaner	Type	Volume	Unit
<input type="checkbox"/> No				
Average daily volume when discharge occurs:			100	<input type="checkbox"/> Gallons/day
				<input checked="" type="checkbox"/> Liters/day
Maximum daily volume when discharge occurs:			200	<input type="checkbox"/> Gallons/day
				<input checked="" type="checkbox"/> Liters/day
Estimated number of days per year discharge will occur:			40	
Estimated total volume per year discharged to the Radioactive Liquid Waste Collection System at TA-50/TA-21			4000	<input type="checkbox"/> Gallons
				<input checked="" type="checkbox"/> Liters

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EDR and Underlying Hazardous Constituents Information - Identify presence of any constituents listed below

Non-Wastewater/Wastewater Category - check only one.

Non Wastewater

Wastewater [as defined by 40 CFR 268.2(f)]

Notification of California List Applicability - Check all that apply.

- Liquid hazardous waste containing PCBs at a concentration of 50 ppm or greater.
 A D001 thru D043 liquid waste containing 134 mg/L or greater of Nickel and/or 130 mg/L or greater of thallium.
 A D001 thru D043 waste containing Halogenated Organic Compounds (HOCs) listed in 40 CFR 268, Appendix III, at 1000 ppm or greater.

Notification Of Underlying Hazardous Constituents

Check the applicable underlying constituents above the concentration levels for D001, D002, D003, and D012 - D043 characteristic wastes only)

No Underlying Hazardous Constituents in this waste stream.

HAZCAT Meeting 40 CFR 268.42(c)

Organic Constituents

- | | | |
|--|--|---|
| <input type="checkbox"/> A2213 | <input type="checkbox"/> Butyl benzyl phthalate | <input type="checkbox"/> p,p'-DDE |
| <input type="checkbox"/> Acenaphthylene | <input type="checkbox"/> 2-sec-Butyl-4,6-dinitrophenol (Dinoseb) | <input type="checkbox"/> o,p'-DDT |
| <input type="checkbox"/> Acenaphthene | <input type="checkbox"/> Carbaryl | <input type="checkbox"/> p,p'-DDT |
| <input type="checkbox"/> Acetone | <input type="checkbox"/> Carbenzadim | <input type="checkbox"/> Dibenz(a,h)anthracene |
| <input type="checkbox"/> Acetonitrile | <input type="checkbox"/> Carbofuran | <input type="checkbox"/> Dibenz(a,e)pyrene |
| <input type="checkbox"/> Acetophenone | <input type="checkbox"/> Carbofuran phenol | <input type="checkbox"/> 1,2-Dibromo-3-chloropropane |
| <input type="checkbox"/> 2-Acetyaminofluorene | <input type="checkbox"/> Carbon disulfide | <input type="checkbox"/> 1,2-Dibromoethane (Ethylene dibromide) |
| <input type="checkbox"/> Acrolein | <input type="checkbox"/> Carbon tetrachloride | <input type="checkbox"/> Dibromomethane |
| <input type="checkbox"/> Acrylamide | <input type="checkbox"/> Carbosulfan | <input type="checkbox"/> m-Dichlorobenzene |
| <input type="checkbox"/> Acrylonitrile | <input type="checkbox"/> Chlordane (alpha & gamma isomers) | <input type="checkbox"/> o-Dichlorobenzene |
| <input type="checkbox"/> Aldicarb sulfone | <input type="checkbox"/> p-Chloroaniline | <input type="checkbox"/> p-Dichlorobenzene |
| <input type="checkbox"/> Aldrin | <input type="checkbox"/> Chlorobenzene | <input type="checkbox"/> Dichlorodifluoromethane |
| <input type="checkbox"/> 4-Aminobiphenyl | <input type="checkbox"/> Chlorobenzilate | <input type="checkbox"/> 1,1-Dichloroethane |
| <input type="checkbox"/> Aniline | <input type="checkbox"/> 2-Chlor-1,3-butadiene | <input type="checkbox"/> 1,2-Dichloroethane |
| <input type="checkbox"/> Anthracene | <input type="checkbox"/> Chlorodibromomethane | <input type="checkbox"/> 1,1-Dichloroethylene |
| <input type="checkbox"/> Aramite | <input type="checkbox"/> Chloroethane | <input type="checkbox"/> trans-1,2-Dichloroethylene |
| <input type="checkbox"/> alpha-BHC | <input type="checkbox"/> bis(2-chloroethoxy) methane | <input type="checkbox"/> 2,4-Dichlorophenol |
| <input type="checkbox"/> beta-BHC | <input type="checkbox"/> bis(2-chloroethyl) ether | <input type="checkbox"/> 2,6-Dichlorophenol |
| <input type="checkbox"/> delta-BHC | <input type="checkbox"/> Chloroform | <input type="checkbox"/> 2,4-Dichlorophenoxyacetic (2,4-D) |
| <input type="checkbox"/> gamma-BHC | <input type="checkbox"/> bis(2-chloroisopropyl) ether | <input type="checkbox"/> 1,2-Dichloropropane |
| <input type="checkbox"/> Barban | <input type="checkbox"/> p-Chloro-m-cresol | <input type="checkbox"/> cis-1,3-dichloropylene |
| <input type="checkbox"/> Bendiocarb | <input type="checkbox"/> 2-Chloroethyl vinyl ether | <input type="checkbox"/> trans-1,3-Dichloropylene |
| <input type="checkbox"/> Bendiocarb phenol | <input type="checkbox"/> Chloromethane (Methyl chloride) | <input type="checkbox"/> Dieldrin |
| <input type="checkbox"/> Benomyl | <input type="checkbox"/> 2-Chloronaphthalene | <input type="checkbox"/> Diethylene glycol, dicarbamate |
| <input type="checkbox"/> Benzene | <input type="checkbox"/> 2-Chlorophenol | <input type="checkbox"/> Diethyl phthalate |
| <input type="checkbox"/> Benz(a)anthracene | <input type="checkbox"/> 3-Chloropropylene | <input type="checkbox"/> p-Dimethylaminoazobenzene |
| <input type="checkbox"/> Benzal chloride | <input type="checkbox"/> Chrysene | <input type="checkbox"/> 2,4-Dimethyl phenol |
| <input type="checkbox"/> Benzo(b)fluoranthene | <input type="checkbox"/> o-Cresol | <input type="checkbox"/> Dimethyl phthalate |
| <input type="checkbox"/> Benzo(k)fluoranthene | <input type="checkbox"/> m-Cresol | <input type="checkbox"/> Dimetilan |
| <input type="checkbox"/> Benzo(g,h,i)perylene | <input type="checkbox"/> p-Cresol | <input type="checkbox"/> Di-n-butyl phthalate |
| <input type="checkbox"/> Benzo(a)pyrene | <input type="checkbox"/> m-Cumenyl methylcarbamate | <input type="checkbox"/> 1,4-Dinitrobenzene |
| <input type="checkbox"/> Bromodichloromethane | <input type="checkbox"/> Cycloate | <input type="checkbox"/> 4,6-Dinitro-o-cresol |
| <input type="checkbox"/> Bromomethane (Methyl bromide) | <input type="checkbox"/> Cyclohexanone | <input type="checkbox"/> 2,4-Dinitrophenol |
| <input type="checkbox"/> 4-Bromophenyl phenyl ether | <input type="checkbox"/> o,p'-DDD | <input type="checkbox"/> 2,4-Dinitrotoluene |
| <input type="checkbox"/> n-Butyl alcohol | <input type="checkbox"/> p,p'-DDD | <input type="checkbox"/> 2,6-Dinitrotoluene |
| <input type="checkbox"/> Butylate | <input type="checkbox"/> o,p'-DDE | <input type="checkbox"/> Di-n-octyl phthalate |

Notification Of Underlying Hazardous Constituents

Check the applicable underlying constituents above the concentration levels for D001, D002, D003, and D012 - D043 characteristic wastes only)

Organic Constituents - continued

<input type="checkbox"/>	Di-n-propylnitrosamine	<input type="checkbox"/>	Methapyrifene	<input type="checkbox"/>	Phorate
<input type="checkbox"/>	1,4-Dioxane	<input type="checkbox"/>	Methiocarb	<input type="checkbox"/>	Phthalic acid
<input type="checkbox"/>	Diphenylamine	<input type="checkbox"/>	Methomyl	<input type="checkbox"/>	Phthalic anhydride
<input type="checkbox"/>	Diphenylnitrosamine	<input type="checkbox"/>	Methoxychlor	<input type="checkbox"/>	Physostigmine
<input type="checkbox"/>	1,2-Diphenylhydrazine	<input type="checkbox"/>	3-Methylcholanthrene	<input type="checkbox"/>	Physostigmine salicylate
<input type="checkbox"/>	Disulfoton	<input type="checkbox"/>	4,4-Methylene bis(2-chloroaniline)	<input type="checkbox"/>	Promecarb
<input type="checkbox"/>	Dithiocarbamates (total)	<input type="checkbox"/>	Methylene chloride	<input type="checkbox"/>	Pronamide
<input type="checkbox"/>	Endosulfan I	<input type="checkbox"/>	Methyl ethyl ketone	<input type="checkbox"/>	Propham
<input type="checkbox"/>	Endosulfan II	<input type="checkbox"/>	Methyl isobutyl ketone	<input type="checkbox"/>	Propoxur
<input type="checkbox"/>	Endosulfan sulfate	<input type="checkbox"/>	Methyl methacrylate	<input type="checkbox"/>	Prosulfocarb
<input type="checkbox"/>	Endrin	<input type="checkbox"/>	Methyl methansulfonate	<input type="checkbox"/>	Pyrene
<input type="checkbox"/>	Endrin aldehyde	<input type="checkbox"/>	Methyl parathion	<input type="checkbox"/>	Pyridine
<input type="checkbox"/>	EPTC	<input type="checkbox"/>	Metolcarb	<input type="checkbox"/>	Safrole
<input type="checkbox"/>	Ethyl acetate	<input type="checkbox"/>	Mexacarbate	<input type="checkbox"/>	Silvex (2,4,5-TP)
<input type="checkbox"/>	Ethyl benzene	<input type="checkbox"/>	Molinat	<input type="checkbox"/>	1,2,4,5-Tetrachlorobenzene
<input type="checkbox"/>	Ethyl cyanide (Propanenitrile)	<input type="checkbox"/>	Naphthalene	<input type="checkbox"/>	Tetrachlorodi-benzo-p-dioxins (TCDDs)
<input type="checkbox"/>	Ethyl ether	<input type="checkbox"/>	2-Naphthylamine	<input type="checkbox"/>	Tetrachlorodibenzofurans (TCDFs)
<input type="checkbox"/>	bis(2-ethylhexyl) phthalate	<input type="checkbox"/>	0-Nitroaniline	<input type="checkbox"/>	1,1,1,2-Tetrachloroethane
<input type="checkbox"/>	Ethyl methacrylate	<input type="checkbox"/>	p-Nitroaniline	<input type="checkbox"/>	1,1,2,2-Tetrachloroethane
<input type="checkbox"/>	Ethylene oxide	<input type="checkbox"/>	Nitrobenzene	<input type="checkbox"/>	Tetrachloroethylene
<input type="checkbox"/>	Famphur	<input type="checkbox"/>	5-Nitro-o-toluidine	<input type="checkbox"/>	2,3,4,6-Tetrachlorophenol
<input type="checkbox"/>	Fluoranthene	<input type="checkbox"/>	o-Nitrophenol	<input type="checkbox"/>	Thiodicarb
<input type="checkbox"/>	Fluorene	<input type="checkbox"/>	p-Nitrophenol	<input type="checkbox"/>	Thiophanate-methyl
<input type="checkbox"/>	Formetanate hydrochloride	<input type="checkbox"/>	N-Nitrosodiethylamine	<input type="checkbox"/>	Tirpate
<input type="checkbox"/>	Formparanate	<input type="checkbox"/>	N-Nitrosodimethylamine	<input type="checkbox"/>	Toluene
<input type="checkbox"/>	Heptachlor	<input type="checkbox"/>	N-Nitroso-di-n-butylamine	<input type="checkbox"/>	Toxaphene
<input type="checkbox"/>	Heptachlor epoxide	<input type="checkbox"/>	N-Nitrosomethylethylamine	<input type="checkbox"/>	Triallate
<input type="checkbox"/>	Hexachlorobenzene	<input type="checkbox"/>	N-Nitrosomorpholine	<input type="checkbox"/>	Tribromomethane (Bromoform)
<input type="checkbox"/>	Hexachlorobutadiene	<input type="checkbox"/>	N-Nitrosopiperidine	<input type="checkbox"/>	1,2,4-Trichlorobenzene
<input type="checkbox"/>	Hexachlorocyclopentadiene	<input type="checkbox"/>	N-Nitrosopyrrolidine	<input type="checkbox"/>	1,1,1-Trichloroethane
<input type="checkbox"/>	Hexachlorodibenzo-p-dioxins (HxCDDs)	<input type="checkbox"/>	Oxamyl	<input type="checkbox"/>	1,1,2-Trichloroethane
<input type="checkbox"/>	Hexachlorodibenzo-furans (HxCDFs)	<input type="checkbox"/>	Parathion	<input type="checkbox"/>	Trichloroethylene
<input type="checkbox"/>	Hexachloroethane	<input type="checkbox"/>	PCBs (total)	<input type="checkbox"/>	Trichloromonofluoromethane
<input type="checkbox"/>	Hexachloropropylene	<input type="checkbox"/>	Pebulate	<input type="checkbox"/>	2,4,5-Trichlorophenol
<input type="checkbox"/>	Indeno (1,2,3-c,d) pyrene	<input type="checkbox"/>	Pentachlorobenzene	<input type="checkbox"/>	2,4,6-Trichlorophenol
<input type="checkbox"/>	Iodomethane	<input type="checkbox"/>	Pentachlorodibenzo-p-dioxins (PeCDDs)	<input type="checkbox"/>	2,4,5-Trichlorophenoxyacetic acid (2,4,5-T)
<input type="checkbox"/>	3-Iodo-2-propynyl n-butylcarbamate	<input type="checkbox"/>	Pentachlorodibenzo-furans (PeCDFs)	<input type="checkbox"/>	1,2,3-Trichloropropane
<input type="checkbox"/>	Isobutyl alcohol	<input type="checkbox"/>	Pentachloroethane	<input type="checkbox"/>	1,1,2-Trichlor-1,2,2-trifluoroethane
<input type="checkbox"/>	Isodrin	<input type="checkbox"/>	Pentachloronitrobenzene	<input type="checkbox"/>	Triethylamine
<input type="checkbox"/>	Isolan	<input type="checkbox"/>	Pentachlorophenol	<input type="checkbox"/>	tris-(2,3-Dibromopropyl) phosphate
<input type="checkbox"/>	Isosafrole	<input type="checkbox"/>	Phenacetin	<input type="checkbox"/>	Vernolate
<input type="checkbox"/>	Kepone	<input type="checkbox"/>	Phenanthrene	<input type="checkbox"/>	Vinyl chloride
<input type="checkbox"/>	Methacrylonitrile	<input type="checkbox"/>	Phenol	<input type="checkbox"/>	Xylenes (total)
<input type="checkbox"/>	Methanol	<input type="checkbox"/>	o-Phenylenediamine		

Reference Number
36404
(For FWO-SWG use only.)

Notification Of Underlying Hazardous Constituents

Check the applicable underlying constituents above the concentration levels for D001, D002, D003, and D012 - D043 characteristic wastes only)

Metal/Inorganic Constituents

- | | | |
|--|--|--|
| <input type="checkbox"/> Antimony | <input type="checkbox"/> Cyanides (Amenable) | <input type="checkbox"/> Selenium |
| <input checked="" type="checkbox"/> Arsenic | <input type="checkbox"/> Fluoride | <input type="checkbox"/> Silver |
| <input type="checkbox"/> Barium | <input checked="" type="checkbox"/> Lead | <input type="checkbox"/> Sulfide |
| <input checked="" type="checkbox"/> Beryllium | <input type="checkbox"/> Mercury (Retort residues) | <input type="checkbox"/> Thallium |
| <input type="checkbox"/> Cadmium | <input type="checkbox"/> Mercury - All others | <input type="checkbox"/> Vanadium |
| <input checked="" type="checkbox"/> Chromium (total) | <input checked="" type="checkbox"/> Nickel | <input checked="" type="checkbox"/> Zinc |
| <input type="checkbox"/> Cyanides (total) | | |

WASTE PROFILE FORM

WPF #: 36404

For rapid processing, complete all sections in black or blue ink and mail to:

SOLID WASTE OPERATIONS GROUP at MS J595.

For assistance with completing this form, call SOLID WASTE
OPERATIONS GROUP at 5-4000

Contact(if other than given below)						
Generators Z Number 150520	Waste Generators Name(print) Cynthia Kowalczyk	WMCs Z Number 093573	WMCs Name(print) MCCORMICK, EGAN			
Cynthia Kowalczyk 6677143	Generators Mail Stop ES11	Waste Generating Group NMT-2	Waste Stream Technical Area 55	Building 000004	Room 209,401,49	WMC Phone # 6678158
Waste Accumulation (Check only one)	<input type="checkbox"/> Satellite Accumulation Area	Site no: _____	<input type="checkbox"/> PCBs Storage Area	Site no: _____		
	<input type="checkbox"/> Less-than-90-days Storage Area	Site no: _____	<input type="checkbox"/> NM Special Waste	Site no: _____		
	<input type="checkbox"/> TSDF	Site no: _____	<input type="checkbox"/> Rad Staging Area Area	Site no: _____		
	<input type="checkbox"/> Universal Waste Storage Area	Site no: _____	<input type="checkbox"/> Rad Storage Area Area	Site no: _____		
	<input type="checkbox"/> Used Oil for Recycle	Site no: _____	<input checked="" type="checkbox"/> None of the Above			
ER Use Only		ER Site		SWMU/AOC #		
Method of Characterization (Check as many as apply.)						
<input checked="" type="checkbox"/> Chemical/Physical Analysis	<input type="checkbox"/> Attached	Samp#: <u>ATTACHED</u>				
<input type="checkbox"/> Radiological Analysis	<input type="checkbox"/> Attached	Samp#: _____				
<input type="checkbox"/> PCB Analysis	<input type="checkbox"/> Attached	Samp#: _____				
<input checked="" type="checkbox"/> AKD	<input type="checkbox"/> Attached	Doc#: <u>NMT2-HCP-001</u>				
<input type="checkbox"/> MSDS	<input type="checkbox"/> Attached					
Section 1 - Waste Prevention/Minimization (answer all questions)						
Can hazard segregation, elimination, or material substitution be used?			<input type="checkbox"/> Yes*	<input checked="" type="checkbox"/> No		
Can any of the materials in the waste stream be recycled or reused			<input type="checkbox"/> Yes*	<input checked="" type="checkbox"/> No		
Has waste minimization been incorporated into procedures or other process controls?			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
Can this waste be generated outside a RCA?			<input type="checkbox"/> Yes*	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	
*Provide Comment						
Section 2 - Chemical and Physical Information						
Waste Type (Check only one.)	Waste Category-Chk all that apply	Waste Source-Check only one	Waste Matrix-Check only one			
<input type="checkbox"/> Unused/Unspent Chemical	<input checked="" type="checkbox"/> Inorganic	Waste Source A	Gas			
<input checked="" type="checkbox"/> Process Waste/Spent Chem/ Other	<input type="checkbox"/> Organic	<input checked="" type="checkbox"/> Materials Processing/Production	<input type="checkbox"/> Gas <= 1.5 Atmospheres pressure			
<input type="checkbox"/> Green is Clean Waste	<input type="checkbox"/> Solvent *	<input type="checkbox"/> Research/Development/Testing	<input type="checkbox"/> Gas > 1.5 Atmospheres pressure			
	<input type="checkbox"/> Degreaser *	<input type="checkbox"/> Scheduled Maintenance	<input type="checkbox"/> Liquefied compressed gas			
	<input type="checkbox"/> Dioxin	<input type="checkbox"/> Housekeeping - Routine	Liquid			
	<input type="checkbox"/> Electroplating	<input type="checkbox"/> Spill Cleanup - Routine	<input checked="" type="checkbox"/> Aqueous			
	<input type="checkbox"/> Treated Hazardous waste or residue	<input type="checkbox"/> Sampling - Routine Monitoring	<input type="checkbox"/> Non-aqueous			
	<input type="checkbox"/> No Longer Contained-In	<input type="checkbox"/> Other (Describe below)	<input type="checkbox"/> Suspended Solids / Aqueous			
	<input type="checkbox"/> Explosive process	Waste Source B	<input type="checkbox"/> Suspended Solids / Non-aqueous			
	<input type="checkbox"/> Infectious/Medical	<input type="checkbox"/> Abatement	Solid			
	<input type="checkbox"/> Biological	<input type="checkbox"/> Construction/Upgrades	<input type="checkbox"/> Powder/Ash			
	<input type="checkbox"/> Beryllium	<input type="checkbox"/> Demolition	<input type="checkbox"/> Solid			
	<input type="checkbox"/> Empty Container	<input type="checkbox"/> Decon/Decom	<input type="checkbox"/> Sludge			
	<input type="checkbox"/> Battery	<input type="checkbox"/> Investigative Derived	<input type="checkbox"/> Absorbed Liquid			
	Asbestos <input type="checkbox"/> friable <input type="checkbox"/> non-friable	<input type="checkbox"/> Orphan/Legacy	<input type="checkbox"/> Debris			
	PCB <input type="checkbox"/> PCB < 50 ppm	<input type="checkbox"/> Remediation/Restoration	Matrix Type (check only one.)			
	<input type="checkbox"/> PCB >= 50 - < 500 ppm	<input type="checkbox"/> Repacking (Secondary)				
	<input type="checkbox"/> PCB >= 500 ppm	<input type="checkbox"/> Unscheduled Maintenance	Estimated Annual Volume (m3)			
	<input type="checkbox"/> Hazardous Waste Contaminated Soil	<input type="checkbox"/> Housekeeping - Non-routine				
	<input type="checkbox"/> Untreated Hazardous Debris	<input type="checkbox"/> Spill Cleanup - Non-routine	18			
	<input type="checkbox"/> Commercial Solid Waste	<input type="checkbox"/> UST - Non-petroleum				
	<input type="checkbox"/> Other	<input type="checkbox"/> UST - Petroleum				
	*See instructions	<input type="checkbox"/> Other (Describe below)				
Classification Information						
<input checked="" type="checkbox"/> Unclassified						
<input type="checkbox"/> Classified/Sensitive						



WASTE PROFILE FORM

WPF #: 36404

01-Jun-2006 07:34 AM

(Version: 2)

Generator :	KOWALCZYK, CYNTHIA NMT-2	MS :	E511
WMC :	MCCORMICK, EGAN NWIS-OS	MS :	E507
FROM :	NWIS-SWO	MS :	J595/5-4000

WASTE PROFILE (WPF) EXTENSION QUESTIONNAIRE

Our files indicate that your WPF#: 36404 was submitted approximately one year ago. Please review the attached copy and answer the following questions concerning your waste stream to determine whether to renew or void your WPF. Note: Only the generator can sign for the extension (to renew). Please return the signed questionnaire to NWIS-SWO at the address listed below. If your waste stream remains the same, your WPF will be extended for another year. Upon approval of this signed Extension Certification, you will receive a notice indicating that your WPF is valid for another year. If there are changes in your waste stream, a new WPF will need to be completed.

Are you currently the same generator as indicated above?

YES _____ X _____ NO _____

Are you currently producing the same type of waste as indicated on WPF#: 36404

YES _____ X _____ NO _____

If yes, please sign the Extension Certification below

If no, will you be producing the same type of waste in the near future?

YES _____ NO _____

If yes, please sign the Extension Certification below

If no, will you be producing a different type of waste?

YES _____ NO _____

If no, sign the Void Approval below to indicate that your WPF should be voided

If yes, please submit a new WPF, along with this memo. We will then void your previous WPF and process a new one.

Extension Certification

I am producing or will produce the same type of waste as indicated in WPF# 36404 Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the waste characterization information on this form is correct and that it meets the requirements of the applicable waste acceptance criteria. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Extension-> Signed *Cynthia K. Kumpf* Z# 150520 Date 1 JUN 06

Void Approval

I will no longer be generating or will be producing a different type or composition (a new WPF will be submitted) of waste as indicated in WPF# 36404

Void-> Signed _____ Date _____

NOTE: PLEASE FOLD AND STAPLE THE FORM TO THE LINE BELOW AND RETURN TO ADDRESS PROVIDED

TO: NWIS-SWO

MS: J595

PHONE: 5-4000

WASTE PROFILE FORM

WPF #: 36404

14-Sep-2004 09:24 AM

(Version: 1)

Generator: ~~SCHULTE, LOUIS D. NMT-2~~ ~~CYNTHIA KOWALCZYK~~
~~WHELAN, MCCORMICK, EGAN FWO-SWO~~
FROM: FWO-SWO

MS : E511
MS : E507
MS : J595/5-4000

WASTE PROFILE (WPF) EXTENSION QUESTIONNAIRE

Our files indicate that your WPF#: 36404 was submitted approximately one year ago. Please review the attached copy and answer the following questions concerning your waste stream to determine whether to renew or void your WPF. Please return the completed questionnaire to FWO-SWO at the address listed below. If your waste stream remains the same, your WPF will be extended for another year. If the original generator is no longer with the generating group or generating this waste, a new WPF will need to be filled out with a new generator. Upon receipt of this questionnaire with a signed Extension Certification, we will send you a return receipt indicating that your WPF is valid for another year. If there are changes in your waste stream, a new WPF will need to be completed.

Are you currently producing the same type of waste as indicated on your WPF#: 36404

YES _____ NO _____

If yes, please sign the Extension Certification below

If no, will you be producing the same type of waste in the near future?

YES _____ NO _____

If yes, please sign the Extension Certification below

If no, will you be producing a different type of waste?

YES _____ NO _____

If no, sign the Void Approval below to indicate that your WPF should be voided

If yes, please submit a new WPF along with this memo. We will then void your previous WPF and process a new one

Extension Certification

I am producing or will produce the same type of waste as indicated in WPF# 36404

Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Extension->

Signed

Cynthia Kowalczyk

Date

10/4/04

Void Approval

I will no longer be generating or will be producing a different type or composition (a new WPF will be submitted) of waste as indicated in WPF# 36404

Void->

Signed _____

Date _____

NOTE: PLEASE FOLD AND STAPLE THE FORM TO THE LINE BELOW AND RETURN TO ADDRESS PROVIDED

TO: FWO-SWO

MS: J595

PHONE: 5-4000

WASTE PROFILE FORM

WPF #: 36404

14-Sep-2004 09:24 AM

(Version: 1)

Generator :	SCHULTE, LOUIS D	MS :	E511	PH :	6651100	Z# :	104239
WMC :	MCCORMICK, EGAN	MS :	E507	PH :	6678158	Z# :	093573
RCRA Rev :	LASH, TAMMY	MS :	J595	PH :	54000	Z# :	120424
Status :	ACTIVE	Activation Date :	23-Oct-2003	Expiration Date :	23-Oct-2004		
Group :	NMI-2	TA :	55	Bldg :	000004	Room :	209-401-49 420

You are required to keep a copy of the WPF(s) in your files for at least three years. This WPF(s) is valid for one year or as long as the composition of the waste you have characterized remains the same and the generator remains the same. Should your waste or generator change, please submit a new WPF to FWO-SWO Customer Service, and attach a copy of the WPF which is being replaced.

WASTE CHARACTERIZATION INFORMATION

Radioactivity Category : RADIOACTIVE-TRU

RCRA Category : HAZARDOUS WASTE

Secondary Info : N/A

Waste Classification : MIXED TRANSURANIC WASTE

Acceptances : TA-50 Acceptance

EPA Hazardous Waste Code : D004

UPDATE
04/02/07

WASTE PROFILE FORM

Contact (if other than given below)		For rapid processing, complete all sections in black or blue ink and mail to: SOLID WASTE OPERATIONS GROUP at MS J595. For assistance with completing this form, call SOLID WASTE OPERATIONS GROUP at 5-4000.				Reference Number 36404 (For SOLID WASTE OPERATIONS GROUP use only.)	
Generator's Z Number	Waste Generator's Name (print) Kowalczyk, Cynthia		WMC's Z Number 093573	WMC's Name (print) Egan D. McCormick			
Generator's Telephone	Generator's Mail Stop	Waste Generating Group	Waste Stream Technical Area 55	Building	Room	WMC Telephone 667-8158	
Waste Accumulation (Check only one.)	<input type="checkbox"/> Satellite Accumulation Area	Site no: _____	<input type="checkbox"/> PCBs Storage Area	Site no: _____	<input type="checkbox"/> NM Special Waste	Site no: _____	
	<input type="checkbox"/> Less-than-90-days Storage Area	Site no: _____	<input type="checkbox"/> Rad Staging Area	Site no: _____	<input type="checkbox"/> Rad Storage Area	Site no: _____	
	<input type="checkbox"/> TSDF	Site no: _____	<input checked="" type="checkbox"/> None of the Above				
	<input type="checkbox"/> Universal Waste Storage Area	Site no: _____					
	<input type="checkbox"/> Used Oil for Recycle	Site no: _____					
ER Use Only:	<input type="checkbox"/> ER Site	SWMU/AOC #: _____					
Method of Characterization (Check as many as apply.)	<input checked="" type="checkbox"/> Chemical/Physical Analysis	<input type="checkbox"/> Attached	Sample #: _____				
	<input type="checkbox"/> Radiological Analysis	<input type="checkbox"/> Attached	Sample #: _____				
	<input type="checkbox"/> PCB Analysis	<input type="checkbox"/> Attached	Sample #: _____				
	<input checked="" type="checkbox"/> Acceptable Knowledge Documentation	<input type="checkbox"/> Attached	Documentation #: _____				
	<input type="checkbox"/> MSDS	<input type="checkbox"/> Attached					

Section 1 - Waste Prevention/Minimization (answer all questions)

Can hazard segregation, elimination, or material substitution be used?	<input type="checkbox"/> Yes (Provide comments)	<input type="checkbox"/> No
Can any of the materials in the waste stream be recycled or reused?	<input type="checkbox"/> Yes (Provide comments)	<input type="checkbox"/> No
Has waste minimization been incorporated into procedures or other process controls?	<input type="checkbox"/> Yes	<input type="checkbox"/> No (Provide comments)
Can this waste be generated outside a RCA?	<input type="checkbox"/> Yes (Provide comments)	<input type="checkbox"/> No <input type="checkbox"/> N/A

Section 2 - Chemical and Physical Information

Waste Type (Check only one.) <input type="checkbox"/> Unused/Unspent Chemical (Complete all sections as appropriate.) <input type="checkbox"/> Process Waste/Spent Chemical/Other (Complete all sections.)	Waste Category (Check all that apply.) <input type="checkbox"/> Inorganic <input type="checkbox"/> Organic <input type="checkbox"/> Solvent * <input type="checkbox"/> Degreaser * <input type="checkbox"/> Dioxin <input type="checkbox"/> Electroplating <input type="checkbox"/> Treated Hazardous waste or residue <input type="checkbox"/> No-Longer Contained-In <input type="checkbox"/> Explosive process <input type="checkbox"/> Infectious/Medical <input type="checkbox"/> Biological <input checked="" type="checkbox"/> Beryllium <input type="checkbox"/> Empty Container (See instructions) <input type="checkbox"/> Battery (See instructions) Asbestos <input type="checkbox"/> friable <input type="checkbox"/> non-friable PCB Source Concentration <input type="checkbox"/> PCB < 50 ppm <input type="checkbox"/> PCB ≥ 50 - < 500 ppm <input type="checkbox"/> PCB ≥ 500 ppm <input type="checkbox"/> Hazardous Waste Contaminated Soil <input type="checkbox"/> Untreated Hazardous Debris	Waste Source (Check only one.) Waste Source A <input type="checkbox"/> Decon <input type="checkbox"/> Materials Processing/Production <input type="checkbox"/> Research/Development/Testing <input type="checkbox"/> Scheduled Maintenance <input type="checkbox"/> Housekeeping - Routine <input type="checkbox"/> Spill Cleanup - Routine <input type="checkbox"/> Sampling - Routine Monitoring <input type="checkbox"/> Other (Describe below) Waste Source B <input type="checkbox"/> Abatement <input type="checkbox"/> Construction/Upgrades <input type="checkbox"/> Demolition <input type="checkbox"/> Decon/Decom <input type="checkbox"/> Investigative Derived <input type="checkbox"/> Orphan/Legacy <input type="checkbox"/> Remediation/Restoration <input type="checkbox"/> Repacking (Secondary) <input type="checkbox"/> Unscheduled Maintenance <input type="checkbox"/> Housekeeping (Non-routine) <input type="checkbox"/> Spill Cleanup (Non-routine) <input type="checkbox"/> UST - Non-petroleum <input type="checkbox"/> UST - Petroleum <input type="checkbox"/> Other (Describe below)	Waste Matrix (Check only one.) Gas <input type="checkbox"/> ≤ 1.5 Atmospheres pressure <input type="checkbox"/> > 1.5 Atmospheres pressure <input type="checkbox"/> Liquefied compressed gas Liquid <input checked="" type="checkbox"/> Aqueous <input type="checkbox"/> Non-aqueous <input type="checkbox"/> Suspended Solids/ Aqueous <input type="checkbox"/> Suspended Solids/ Non-aqueous Solid <input type="checkbox"/> Powder/Ash/Dust <input type="checkbox"/> Solid <input type="checkbox"/> Sludge <input type="checkbox"/> Absorbed/solidified liquid <input type="checkbox"/> Debris Matrix Type (Check only one.) <input type="checkbox"/> Homogeneous <input type="checkbox"/> Heterogeneous (Describe below) Estimated Annual Volume (m³):
Radiological Information Was Waste Generated in a RCA? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Non-radioactive <input type="checkbox"/> Radioactive - Low Level <input type="checkbox"/> Radioactive - Transuranic			
Waste Destination (Check only one.) <input type="checkbox"/> SWWS (Complete Attachment 1) <input type="checkbox"/> RLWTF (Complete Attachment 2) <input type="checkbox"/> RLWTP (Complete Attachment 3) <input type="checkbox"/> TA-16/HE (Complete Attachment 4) <input type="checkbox"/> NTS (Complete Attachment 5)			
Classification Information <input type="checkbox"/> Unclassified <input type="checkbox"/> Classified/Sensitive	<input type="checkbox"/> Commercial Solid Waste <input type="checkbox"/> Other (Describe below) * See instructions.		

Section 3 – Process and Waste Descriptions

Process Description:

Waste Description:

Section 4 – Characteristics

Ignitability (Check only one.) (°F) (°C) <input type="checkbox"/> < 73 < 22.8 <input type="checkbox"/> 73 - 99 22.8 - 37.2 <input type="checkbox"/> 100 - 139 37.8 - 59.4 <input type="checkbox"/> 140 - 200 60.0 - 93.3 <input type="checkbox"/> > 200 > 93.3 <input type="checkbox"/> EPA Ignitable – Non-liquid <input type="checkbox"/> DOT Flammable Gas <input type="checkbox"/> DOT Oxidizer <input type="checkbox"/> Not ignitable	Corrosivity (Check only one.) (pH) <input type="checkbox"/> ≤ 2.0 <input type="checkbox"/> 2.1 – 4.0 <input type="checkbox"/> 4.1 – 6.0 <input type="checkbox"/> 6.1 – 9.0 <input type="checkbox"/> 9.1 – 12.4 <input type="checkbox"/> ≥ 12.5 <input type="checkbox"/> Liquid corrosive to steel <input type="checkbox"/> Non-aqueous	Reactivity (Check as many as apply.) <input type="checkbox"/> RCRA Unstable <input type="checkbox"/> Water Reactive <input type="checkbox"/> Cyanide Bearing <input type="checkbox"/> Sulfide Bearing <input type="checkbox"/> Pyrophoric <input type="checkbox"/> Shock Sensitive <input type="checkbox"/> Explosive - DOT Div. _____ <input type="checkbox"/> Non-reactive	Boiling Point (Check only one.) (°F) (°C) <input type="checkbox"/> ≤ 95 ≤ 35 <input type="checkbox"/> > 95 > 35 <input type="checkbox"/> Not applicable
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Identify for all contaminants listed.	Characterization Method			None or Non-detect	Concentration of Contaminants		Regulatory Limit
	AK	TCLP	Total		Minimum	Maximum	
Toxicity Characteristic Metals							
Arsenic	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5	to 32 ppm	5.0 ppm
Barium	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	to 2 ppm	100.0 ppm
Cadmium	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	to 10 ppm	1.0 ppm
Chromium (Total)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.1	to 1.0 ppm	5.0 ppm
Lead	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.1	to 5.0 ppm	5.0 ppm
Mercury	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	0.2 ppm
Selenium	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	1.0 ppm
Silver	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	to 10 ppm	5.0 ppm
Toxicity Characteristic Organics							
Benzene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	0.5 ppm
Carbon tetrachloride	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	0.5 ppm
Chlorobenzene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	100.0 ppm
Chloroform	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	6.0 ppm
o - cresol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	200.0 ppm
m - cresol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	200.0 ppm
p - cresol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	200.0 ppm
Cresol - mixed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	200.0 ppm
1,4-Dichlorobenzene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	7.5 ppm
1,2-Dichloroethane	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	0.5 ppm
1,1-Dichloroethylene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	0.7 ppm
2,4-Dinitrotoluene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	0.13 ppm
Hexachlorobenzene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	0.13 ppm
Hexachlorobutadiene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	0.5 ppm
Hexachloroethane	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	3.0 ppm
Methyl ethyl ketone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	200.0 ppm
Nitrobenzene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	2.0 ppm
Pentachlorophenol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	100.0 ppm
Pyridine	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	5.0 ppm
Tetrachloroethylene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	0.7 ppm
Trichloroethylene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	0.5 ppm
2,4,5-Trichlorophenol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	400.0 ppm
2,4,6-Trichlorophenol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	2.0 ppm
Vinyl chloride	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	0.2 ppm
Herbicides and Pesticides							
Chlordane	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	0.03 ppm
2,4-D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	10.0 ppm
Endrin	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	0.02 ppm
Heptachlor (& its epoxide)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	0.008 ppm
Lindane	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	0.4 ppm
Methoxychlor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	10.0 ppm
Toxaphene	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	0.5 ppm
2,4,5-TP (Silvex)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		to ppm	0.5 ppm

Section 5 - Additional Constituents and Information

Additional Constituents and Contaminants. Please account for 100% of waste. Ranges should be given within guidelines of individual constituents. List all other constituents (including inerts) not identified above and attach any applicable analysis. No chemical formulas allowed in this field. Continue in Section 3 Additional Information as necessary. CAS Numbers are needed for all chemical constituents, for material without a CAS Number enter "No CAS Number." Contact Waste Services at 5-4000 for assistance.

CAS No.	Name of constituent	Minimum	Maximum
	Caustic Filtrates	5	to 10 %
7732-18-5	Water	80	to 99 %
7440-38-2	Arsenic	0.0005	to 0.0052
7440-39-3	Barium	0.0001	to 0.0002
7440-43-9	Cadmium	0.0001	to 0.001
7440-47-3	Chromium	0.0001	to 0.001
7439-92-1	Lead	0.0001	to 0.0005
7440-22-4	Silver	0.0001	to 0.001
7440-41-7	Beryllium	0.000097	to 0.53
			to %
Total of max. ranges of this section and page 2		109.5 in %	

WAC 4/2/07

Additional Information (Use additional sheet if necessary.)

If additional information is available on the chemical, physical, or radiological character of the waste not covered on this form, provide it below:

Section 6 - Work Control Documentation (answer all questions)

- Do the procedures for this process cover how to manage this waste? Yes No (Provide comments)
- Do the procedures for this process address controls to prevent changes to waste constituents and concentrations or addition or removal of waste to/from containers? Yes No (Provide comments)

Section 7 - Packaging and Storage Control

Describe how the waste will be packaged in according to the applicable WAC: Waste is transported to the treatment facility through hard-plumbed lines.

Identify the storage management controls that will be used for this waste stream: (check all that apply)

- Tamper indication devices Locked cabinet or building
- Limited use locks with log-in for waste Other (describe)

Section 8 - Waste Certification Statements (check only one)

- Waste appears to meet WAC chapter for:
- Waste stream needs exception/exemption for treatment, storage, or disposal at:
- Waste does not meet the criteria for any known TSDF. (DOE approval is required. Contact the Waste Management Program Office for assistance.)

WASTE GENERATOR CERTIFICATION: Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the waste characterization information on this form is correct and that it meets the requirements of the applicable waste acceptance criteria. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Signature

Date

WASTE CERTIFYING OFFICIAL: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and accurate. I certify, to the best of my knowledge, that the waste characterization information provided by the waste generator meets the requirements of the applicable WAC.

Signature

Date

Attachment 4 - LDR and UHC Information

Identify category and presence of any constituents listed below (equal to or above limit).

Non-Wastewater / Wastewater Category -- Check only one.

Non Wastewater Wastewater [as defined by 40 CFR 268.2(f)] Lab Pack [40 CFR 268.42(c)] Sign Certification #1

NOTIFICATIONS AND CERTIFICATIONS -- Check the applicable boxes

GENERATOR REQUIREMENTS:

- This shipment contains hazardous waste contaminated soil that does not meet treatment standards Sign Certification #2
- This shipment contains untreated hazardous debris to be treated to 40 CFR 268.45 treatment standards (No certification)
- Hazardous wastes (except soil) meeting treatment standards at point of generation Sign Certification #3
- Hazardous wastes contaminated soil meeting treatment standards at point of generation Sign Certification #4

TSDF OR GENERATOR TREATMENT:

- TSDF Treated hazardous debris meeting the alternative treatment standards of 40 CFR 268.45 Sign Certification #5
- Generator Treated hazardous debris meeting the alternative treatment standards of 40 CFR 268.45 Sign Certification #6
- Hazardous wastes contaminated soil treated to 40 CFR 268.49 Sign Certification #7
- Wastes or Residues from characteristic hazardous waste treatment meeting treatment standards and UTS Sign Certification #8
- Wastes or Residues from characteristic hazardous waste treatment not meeting UTS Sign Certification #9
- Other TSDF wastes meeting the more stringent 40 CFR 268.40 treatment standards to be land disposed Sign Certification #10
- Other Generator wastes meeting the more stringent 40 CFR 268.40 treatment standards to be land disposed Sign Certification #11

Notification Of Underlying Hazardous Constituents

(Check the applicable underlying constituents above the concentration levels for D001 through D043 characteristic wastes only)

No Underlying Hazardous Constituents in this waste stream.

	Organic constituents		CASRN ¹	Wastewater standard	Non wastewater standard	Hazardous Soil 10Xs UTS Nonwastewater
<input type="checkbox"/>	Acenaphthylene		208-96-8	0.059	3.4	34
<input type="checkbox"/>	Acenaphthene		83-32-9	0.059	3.4	34
<input type="checkbox"/>	Acetone		67-64-1	0.28	160	1600
<input type="checkbox"/>	Acetonitrile		75-05-8	5.6	38	380
<input type="checkbox"/>	Acetophenone		96-86-2	0.010	9.7	97
<input type="checkbox"/>	2-Acetylaminofluorene		53-96-3	0.059	140	1400
<input type="checkbox"/>	Acrolein		107-02-8	0.29	NA	NA
<input type="checkbox"/>	Acrylamide		79-06-1	19	23	230
<input type="checkbox"/>	Acrylonitrile		107-13-1	0.24	84	840
<input type="checkbox"/>	Aldicarb sulfone		1646-88-4	0.056	0.28	2.8
<input type="checkbox"/>	Aldrin		309-00-2	0.021	0.066	0.66
<input type="checkbox"/>	4-Aminobiphenyl		92-67-1	0.13	NA	NA
<input type="checkbox"/>	Aniline		62-53-3	0.81	14	140
<input type="checkbox"/>	Anthracene		120-12-7	0.059	3.4	34
<input type="checkbox"/>	Aramite		140-57-8	0.36	NA	NA
<input type="checkbox"/>	alpha-BHC		319-84-6	0.00014	0.066	0.66
<input type="checkbox"/>	beta-BHC		319-85-7	0.00014	0.066	0.66
<input type="checkbox"/>	delta-BHC		319-86-8	0.023	0.066	0.66
<input type="checkbox"/>	gamma-BHC		58-89-9	0.0017	0.066	0.66
<input type="checkbox"/>	Barban		101-27-9	0.056	1.4	14
<input type="checkbox"/>	Bendiocarb		22781-23-3	0.056	1.4	14
<input type="checkbox"/>	Benomyl		17804-35-2	0.056	1.4	14
<input type="checkbox"/>	Benzene		71-43-2	0.14	10	100
<input type="checkbox"/>	Benz(a)anthracene		56-55-3	0.059	3.4	34
<input type="checkbox"/>	Benzal chloride		98-87-3	0.055	6.0	60
<input type="checkbox"/>	Benzo(b)fluoranthene		205-99-2	0.11	6.8	68
<input type="checkbox"/>	Benzo(k)fluoranthene		207-08-9	0.11	6.8	68

	Organic constituents		CASRN ¹	Wastewater standard	Non wastewater standard	Hazardous Soil 10Xs UTS Nonwastewater
<input type="checkbox"/>	1,2,3-Trichloropropane		96-18-4	0.85	30	300
<input type="checkbox"/>	1,1,2-Trichloro-1,2,2-trifluoroethane		76-13-1	0.057	30	300
<input type="checkbox"/>	Triethylamine		121-44-8	0.081	1.5	15
<input type="checkbox"/>	tris-(2,3-Dibromopropyl) phosphate		126-72-7	0.11	0.10	1.0
<input type="checkbox"/>	Vernolate		1929-77-7	0.042	1.4	14
<input type="checkbox"/>	Vinyl chloride		75-01-4	0.27	6.0	60
<input type="checkbox"/>	Xylenes (total)		1330-20-7	0.32	30	300
	Metal/inorganic Constituents		CASRN ¹	Wastewater standard	Non wastewater standard	Hazardous Soil 10Xs UTS Nonwastewater
<input type="checkbox"/>	Antimony		7440-36-0	1.9	1.15 mg/l TCLP	11.5 mg/l TCLP
<input checked="" type="checkbox"/>	Arsenic		7440-38-2	1.4	5.0 mg/l TCLP	50 mg/l TCLP
<input checked="" type="checkbox"/>	Barium		7440-39-3	1.2	21 mg/l TCLP	210 mg/l TCLP
<input checked="" type="checkbox"/>	Beryllium		7440-41-7	0.82	1.22 mg/l TCLP	12.2 mg/l TCLP
<input checked="" type="checkbox"/>	Cadmium		7440-43-9	0.69	0.11 mg/l TCLP	1.1 mg/l TCLP
<input checked="" type="checkbox"/>	Chromium (Total)		7440-47-3	2.77	0.60 mg/l TCLP	6.0 mg/l TCLP
<input type="checkbox"/>	Cyanides (Total) ⁴		57-12-5	1.2	590	5900
<input type="checkbox"/>	Cyanides (Amenable) ⁴		57-12-5	0.86	30	300
<input type="checkbox"/>	Fluoride		16984-48-8	35	NA	NA
<input checked="" type="checkbox"/>	Lead		7439-92-1	0.69	0.75 mg/l TCLP	7.5 mg/l TCLP
<input type="checkbox"/>	Mercury (Retort residues)		7439-97-6	NA	0.20 mg/l TCLP	2.0 mg/l TCLP
<input type="checkbox"/>	Mercury - All others		7439-97-6	0.15	0.025 mg/l TCLP	0.25 mg/l TCLP
<input checked="" type="checkbox"/>	Nickel		7440-02-0	3.98	11 mg/l TCLP	110 mg/l TCLP
<input type="checkbox"/>	Selenium		7782-49-2	0.82	5.7 mg/l TCLP	57 mg/l TCLP
<input checked="" type="checkbox"/>	Silver		7440-22-4	0.43	0.14 mg/l TCLP	1.4 mg/l TCLP
<input type="checkbox"/>	Sulfide		18496-25-8	14	NA	NA
<input type="checkbox"/>	Thallium		7440-28-0	1.4	0.20 mg/l TCLP	2.0 mg/l TCLP
<input type="checkbox"/>	Vanadium ⁵		7440-62-2	4.3	1.6 mg/l TCLP	16 mg/l TCLP
<input type="checkbox"/>	Zinc ⁵		7440-66-6	2.61	4.3 mg/l TCLP	43 mg/l TCLP

RUN NUMBER: CXLF32494 ICP

PARENT LOTS	NET WT.	Pu WT.
PMA 5122	76.4g	60g
PMA 9397	896.4g	884g
combined into CXLD32494	972.8g	944g

SAMPLE ID	Volume	SAI	R04 Pu	R04 Am	ICP RESULTS IN PPM																
					Ag	As	Ba	Be	Ca	Cd	Cr	Fe	Hg	K	Mg	Na	Ni	Pb	Se	U	Tl
CXLF32494	4.9	941.00	932.00	0.345	10	5	1	1	1100	10	35	250		1000	95	460	63	6.8	8		
CXLF Total					0.05	0.02	0.00	0.00	5.39	0.05	0.17	1.23		4.90	0.47	2.25	0.31	0.03	0.04		
CXL3EL32494	4.8	15g	17g	0.0009	10	5	1	1	28	10	2.5	280		60	9.3	48	5	5	8		
CXL3EL Total					0.05	0.02	0.00	0.00	0.13	0.05	0.01	1.34		0.29	0.04	0.23	0.02	0.02	0.02	0.04	
CXLP32494	25.6	855g	880g	0.000497		10	2	2	30	2	2	3.4	10	120	16	750	10	10	20	40	
CXLP Total					0.00	0.05	0.01	0.01	0.15	0.01	0.01	0.02	0.05	0.59	0.08	3.68	0.05	0.05	0.10	0.20	
CXLR32494A	19.6	0g	2.22g	0.154	1	5	1	1	87	1	3	1	5	130	25	4100	5	9.1	8	20	
CXLR32494B	16.0	17g	16.5g	0.193		10	2	2	84	2	7.6	2	10	190	33	6200	10	10	20	40	
CXLR32492C	16.0	0g	.752g	0.00457	1	5	1	1	30	1	1	1	5	60	8	2900	5	7	8	20	
CXLR32494D	15.9	0g	.223g	0.001	1	5	1	1	28	1	1	1	5	60	8	2900	5	5	8	20	
CXLR Total	67.50				0.05	0.42	0.08	0.08	3.97	0.08	0.21	0.08	0.42	7.50	1.27	272.07	0.42	0.53	0.73	1.67	
CXLOXF32494A	45.0	0g	3.46g	0.000096	NR	5	1	1	10	1	1	2.3	NR	8	340	5	5	8	20	20	
CXLOXF32494B	24.8	6g	1.40g	0.000065	NR	5	1	1	9.4	1	1	1	NR	8	340	5	5	8	20	20	
CXLOXF32494A2	Repeat for ICP				NR	5	1	1	9.4	1	1	1.9	NR	8	340	5	5	8	20	20	
CXLOXF32494B1	Repeat for ICP				NR	5	1	1	9.4	1	1	1	NR	8	310	5	5	8	20	20	

Column sat overnight leading to high activity in wash the next morning

CXLOX Total

NET WT. Pu wt, 87%

CXLPROD2	988.2	859.70
CXLPRODS2	4.5	4.00
COMBINED 1 & 2	1803.0	1568.60

CXLOXOH32494B-5	NR	5	1	1	15	1	1	2.7	NR	8	300	5	5	8	20	20
CXL3ELOH32494C-1	NR	5	1	1	40	1	1	2.7	NR	8	380	5	5	8	20	20
JNKCXLOH4694-6	NR	5	1	1	9600	1	1	1	NR	8	1100	5	5	8	20	20
CLNJNK51994-3	NR	5	1	1	140	1	2.8	2.1	NR	8	320	5	5	8	20	20

CXLOH22894-1
CXLOH22894-2
CXLOH22894-3

RUN NUMBER: CXLF81894 ICP

SAMPLE ID	Volume	SAI	R04				calc. alpha C/L	obs. alpha C/L	ICP RESULTS IN PPM																
			Pu (mg/L)	Pu (g)	Am (mg/L)	Am (g)			Ag	As	Ba	Be	Ca	Cd	Cr	Fe	Hg	K	Mg	Na	Ni	Pb	Se	U	Tl
CXLF081894	?							NR	5	1	5300	250	2	1	440	NR	NR	230	72	56	90	8	NR	20	
CXLF+3081894	4.0		50250.00	201.00	49.50	0.198000	4.22E+00	NR	5	1	4800	310	1	1	390	NR	NR	310	130	52	74	20	NR	20	
CXLF+3081894 Total (g)									0.02	0.00	19.20	1.24	0.00	0.00	1.56			1.24	0.52	0.21	0.30	0.08		0.08	
CXLL3EL081894	2.3		10695.65	24.600	0.44	0.001020	8.65E-01	NR	5	1	62	29	1	1	670	NR	NR	8	16	5	5	8	NR	20	
CXLL3EL081894 Total (g)									0.01	0.00	0.14	0.07	0.00	0.00	1.54			0.03	0.05	0.02	0.02	0.03		0.08	
CXLLP081894	6.0		28000.00	168.000	0.42	0.002520	2.26E+00	NR	5	1	1	37	1	1	4.3	NR	NR	8	25	6	5	20	NR	20	
CXLP Total (g)									0.03	0.01	0.01	0.22	0.01	0.01	0.03			0.05	0.15	0.04	0.03	0.12		0.12	
CXLLQXF081894	10.70		148.73	1.57	0.04	0.000381	1.20E-02	NR	5	1	1	17	1	1	2.9	10	NR	8	390	5	5	20	20	20	
CXLLQXF081894 Total (g)									0.05	0.01	0.01	0.18	0.01	0.01	0.03	0.11		0.09	4.17	0.05	0.05	0.21	0.21	0.21	
CXLLQXF0H081894	14.00							2.24E-04	NR	5	1	2.7	15	1	1	3.1	5	17000	33	260	5	5	8	20	20
CXLLQXF0H081894 Total (g)									0.07	0.01	0.04	0.21	0.01	0.01	0.04	0.07	238.00	0.46	3.64	0.07	0.07	0.11	0.28	0.28	
CXLLR081894	10.8		125.00	1.350	18.52	0.200000	7.01E-02	NR	5	1	1900	180	1	1	1	5	NR	150	2000	20	25	20	20	20	
CXLR Total (g)									0.05	0.01	20.52	1.94	0.01	0.01	0.01	0.05		1.62	21.60	0.22	0.27	0.22	0.22	0.22	
CXLLR081894A	12.5 with line rinse & 1 L prep							4.02E-03	NR	5	1	1700	200	1	1	1	5	NR	220	2000	18	21	8	20	20
CXLLR081894A Total (g)									0.06	0.01	21.25	2.50	0.01	0.01	0.01	0.06		2.75	25.00	0.23	0.26	0.10	0.25	0.25	
CXLLROH081894A	22.00							5.45E-04	NR	5	1	900	15	1	1	1	5	60	11	1000	5	11	8	20	20
CXLLROH081894A Total (g)									0.11	0.02	19.80	0.33	0.02	0.02	0.02	0.11	1.32	0.24	22.00	0.11	0.24	0.18	0.44	0.44	
CXLLTRUEL081894	1.0		1320.00	1.320	1.42	0.001420	1.11E-01	NR	5	1	1	23	1	1	6.9	NR	NR	8.6	12	5	5	8	NR	20	
CXLLTRUEL081894 Total (g)									0.01	0.00	0.00	0.02	0.00	0.00	0.01			0.01	0.01	0.01	0.01	0.01		0.02	
DAPEL081894	1.0		606.00	0.606000	157.00	0.157000	5.58E-01	NR	5	1	1	24	1	1	1	5	NR	12	12	5	43	8	NR	20	
DAPEL081894 Total (g)									0.01	0.00	0.00	0.02	0.00	0.00	0.00	0.01		0.01	0.01	0.01	0.04	0.01		0.02	
DAPELOH081894	1.3							3.43E-04	NR	5	1	1	15	1	1	1	5	NR	8	23	5	5	8	20	20
DAPELOH081894 Total (g)									0.01	0.00	0.00	0.02	0.00	0.00	0.00	0.01		0.01	0.03	0.01	0.01	0.01	0.03	0.03	

Waste Polishing DF= 17.4 % alpha removed= 94.268

Redissolved Cake in 900 mL of HCl/H2O. Column Prep added to feed. 2.2 L volume, 7.1 M [H+]

CXLLR081894B	2.2		61.60	0.135520	34.80	0.076560	1.18E-01		1	5	1	1800	880	1	100	1	5	17000	870	140	76	5	8	20	20
CXLLR081894B Total (g)									0.00	0.01	0.00	3.96	1.50	0.00	0.22	0.00	0.01	37.40	1.91	0.31	0.17	0.01	0.02	0.04	0.04
CXLLR081894C	3.6							4.50E-05	1	5	1	1300	460	1	70	1	5	11000	590	110	51	5	8	20	20
CXLLR081894C Total (g)									0.00	0.02	0.00	4.94	1.75	0.00	0.27	0.00	0.02	41.80	2.24	0.42	0.19	0.02	0.03	0.08	0.08
DAPEL081894B	1.1		88.30	0.097130	34.90	0.038390	1.20E-01		1	5	1	5.6	18	1	1	2	5	87	8	13	5	5	8	10	20
DAPEL081894B Total (g)									0.00	0.01	0.00	0.01	0.02	0.00	0.00	0.00	0.01	0.10	0.01	0.01	0.01	0.01	0.01	0.01	

Waste Polishing DF= 2813.5 % alpha removed= 99.962

SAMPLE ID	CST/CMR Oxide analysis in ug/mL (ppm)											
	Pu %	Fe	Ca	Cr	K	Mg	Be	Na	Ni	Pb	Ag	Ga
CXLPROD 4 162 g SNM	87.00	120	190-2500	10	55	20-70	10	135				15
	U	Np	Am		Pu isotope							
	30	33	32		238	239	240	241				
				on 11/15/94	0.017	#####	5.890	0.245				

RUN NUMBER: 72594

SAMPLE ID	Volume	SAI	R04				calc. alpha C/L	obs. alpha C/L	ICP RESULTS IN PPM																	
			Pu (mg/L)	Pu (g)	Am (mg/L)	Am (g)			Ag	As	Ba	Be	Ca	Cd	Cr	Fe	Hg	Mg	Na	Ni	Pb	Se	U	Tl		
CXL+3EL 72594		3.9	.0476 g																							
CXL+3EL 72594	Total (g)																									
CXLF 72594		19.0	5047.37	95.900	12.42	0.238000	4.48E-01		NR	5	1	1.7	2800	1	160	1.4	NR	2700	9000	110	13	8	20	40		
CXLF 72594	Total (g)									0.10	0.02	0.03	53.20	0.02	3.04	0.03		51.30	171.00	2.09	0.25	0.15	0.38	0.76		
CXLP 72594		18.5	5091.89	94.200	0.08	0.001410	4.11E-01		NR	5	1	1	15	1	1	5	NR	8	7	5	5	8	20	20		
CXLP 72594	Total (g)									0.09	0.02	0.02	0.28	0.02	0.02	0.09		0.15	0.13	0.09	0.09	0.15	0.37	0.37		
CXLOXF 72594		21.0	206.19	4.330	0.10	0.002000	1.70E-02		NR	5	1	1	18	1	1	18	5	8	250	5	5	8	20	20		
CXLOXF 72594	Total (g)									0.11	0.02	0.02	0.38	0.02	0.02	0.38	0.11	0.17	5.25	0.11	0.11	0.17	0.42	0.42		
CXLOXFOH 72594									NR	5	1	1	77	1	1	4.7	5	3300	390	5	5	8	20	20		
CXLOXFOH 72594	Total (g)																									
CXLLR 72594		31.3	112.14	3.510	8.02	0.251000	3.50E-02		NR	5	1	1	1800	1	110	1	5	1700	7500	69	5	8	20	20		
CXLLR 72594	Total (g)									0.16	0.03	0.03	56.34	0.03	3.44	0.03	0.16	53.21	234.75	2.16	0.16	0.25	0.63	0.63		
CXLLR 72594	A	32.0	9.38	0.300	1.87	0.058800	6.81E-03	2.96E-03	NR	5	1	1	2.1	1	100	1.5	5	1800	8300	71	5	8	20	20		
CXLLR 72594	A Total (g)			5.0 M [H+]						0.16	0.03	0.03	0.07	0.03	3.20	0.05	0.16	60.80	265.60	2.27	0.16	0.26	0.64	0.64		
CXLLTRUEL 72594	A	1.3	4192.31	5.450	4.36	0.005670	3.53E-01		NR	5	1	1	330	1	17	38	5	290	1300	20	5	8	75	20		
CXLLTRUEL 72594	A Total (g)									0.01	0.00	0.00	0.43	0.00	0.02	0.05	0.01	0.38	1.69	0.03	0.01	0.01	0.10	0.03		
CXLLTRUELOH 72594	A	2.0							NR	5	1	1	2200	1	1.9	1	5	8	8.4	5	5	8	20	20		
CXLLTRUELOH 72594	A Total (g)									0.01	0.00	0.00	4.40	0.00	0.00	0.00	0.01	0.02	0.02	0.01	0.01	0.02	0.04	0.04		
CXLLDAPEL 72594	A	1.5	644.00	0.966	128.57	0.193000	4.69E-01		NR	5	1	1	270	1	13	9.5	5	230	900	8.9	5	8	20	20		
CXLLDAPEL 72594	A Total (g)									0.01	0.00	0.00	0.41	0.00	0.02	0.01	0.01	0.35	1.35	0.01	0.01	0.01	0.03	0.03		
CXLLDAPELOH 72594	A	2.0							NR	5	1	1	58	1	1	1	5	8	600	5	5	8	20	20		
CXLLDAPELOH 72594	A Total (g)									0.01	0.00	0.00	0.11	0.00	0.00	0.00	0.01	0.02	1.20	0.01	0.01	0.02	0.04	0.04		
CXLLR 72594	B	45.0						1.79E-05	1	5	1	1	1300	1	74	1	5	1200	5400	51	5	8	20	20		
CXLLR 72594	B Total (g)			7.0 M [H+]					0.05	0.23	0.05	0.05	58.50	0.05	3.33	0.05	0.23	54.00	243.00	2.30	0.23	0.36	0.90	0.90		
CXLLDAPEL 72594	B	1.0	308.00	0.308	61.50	0.061500	2.24E-01		1	5	1	1	250	1	11	72	5	220	820	9	5	8	20	20		
CXLLDAPEL 72594	B Total (g)								0.00	0.01	0.00	0.00	0.25	0.00	0.01	0.07	0.01	0.22	0.82	0.01	0.01	0.01	0.02	0.02		
Waste Polishing DF=		1954.4			% alpha removed=	99.949																				
CXLOH 72594	Total (g)	90.0							NR	10	2	2	120	2	2	2	10	11000	56	10	10	20	40	NR		
CXLOH 72594	Total (g)									0.90	0.18	0.18	10.80	0.18	0.18	0.18	0.90	990.00	5.04	0.90	0.90	1.80	3.60			
Redissolved cake samples																										
KOHPPT 72594		1.0							NR	10	2	4.1	1300	2	600	22	1	4300	310	350	18	20	NR	40		
KOHPPT 72594	Total (g)									0.01	0.00	0.00	1.30	0.00	0.60	0.02	0.00	4.30	0.31	0.35	0.02	0.02		0.04		
MgOHPPT 72594		1.0							NR	10	2	2	150	2	130	43	1	20000	140	88	18	20	NR	40		
MgOHPPT 72594	Total (g)									0.01	0.00	0.00	0.15	0.00	0.13	0.04	0.00	20.00	0.14	0.07	0.02	0.02		0.04		
KOHPPT 72594		1.0							NR	10	2	4.1	1300	2	600	1	22	4300	310	350	18	20	NR	40		
KOHPPT 72594	Total (g)									0.01	0.00	0.00	1.30	0.00	0.60	0.00	0.02	4.30	0.31	0.35	0.02	0.02		0.04		

