21 0033987

START

FILE 2727-S NONRADIOACTIVE WASTE DISPOSAL FACILITY

-GEM CORR

DSI-W1 Nov 15, 91

Single sample acceptance, results and narative

38.0641

84-3000-1011(B-09)

NOV 18 1991

DON'T SAY IT --- *Write It!*

DATE 11/15/91

TO Joe Witczak Ecology FROM Tom Wilczek WHC

Joe Here is the USPCI Results of their Analysis of the 2727-S Sample. Pages 1-3 ~~were~~ is their official Acceptance Transmission. The remaining Pages were transmitted to clarify the Analysis Codes & Analytical Parameters.

Please call me if you have any questions or Comments! Thanks, Tom

4 JAN 1994 RECEIVED EDMC

USPCI
A Subsidiary of Union Pacific Corporation

NOV 18 1991

NOTIFICATION OF WASTE ACCEPTANCE 10/22/91
Grassy Mountain FIMS

CUSTOMER INFORMATION
EPA ID#: WA7890008967
US DEPARTMENT OF ENERGY
2355 STEVENS DRIVE
RICHLAND WA 99352
CONTACT: GLADYS HACKETT
PHONE: (509) 376-4769

INVOICE INFORMATION
REF #:WAWESTINGHOU
WESTINGHOUSE HANFORD COMPANY
PO BOX 1970
RICHLAND WA 99352
CONTACT: L. M. ROWLEY
PHONE: (509) 376-~~1955~~ 4611

PROFILE SHEET #: 79796 SAMPLE #: WP91-3289 ACCEPTANCE #: GM91-2090
RECEIVED: 10/03/91 RECEIVED: 10/03/91 NON RCRA WASTE SOLID
Last Change Date..: 10/21/91

Thank you for selecting USPCI for your waste management requirements. Your waste stream has been reviewed and is acceptable for management at our facility based on the information provided on the profile sheet number listed above and conditions listed below. Our facility has the necessary permits to allow the storage, the treatment, or the disposal of this waste. The above referenced acceptance number should be listed on all shipping documents and correspondence. Please retain these documents for your records and future reference.

Please contact Customer Service at (801) 595-3900 should you have any questions. To schedule a shipment contact USPCI customer service at 1-800-877-2416.

USPCI Sales Representative: JIM HARDMAN PHONE: (206) 661-7809

CEPTANCE INFORMATION

The waste stream identified by the reference number above is acceptable for disposal

This waste is acceptable for delivery beginning on 10/21/91 thru 10/21/92, at which time an update review may be required for continued acceptability.

ments: RCRA CELL

pping requirements:
e of Container: SOLID (BULK)

P.O. Box 22750 • Salt Lake City, Utah 84122-9998 • 801/595-3900 • Fax 801/595-3990

10/22/91

U.S. POLLUTION CONTROL IS PROUD TO BE A FULL SERVICE COMPANY!
We want to assist you with the proper completion of the Uniform Hazardous Waste Manifest for this waste stream. Based on your generator information received and our analytical data from WS NUMBER # GM91-2090 , we suggest your waste stream could be shipped using the following information.

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID No. WA7890008967	Manifest Document No	2. Page 1 of___	
3. Generator's Name and Mailing Address US DEPARTMENT OF ENERGY 2355 STEVENS DRIVE RICHLAND WA 99352 4. Generator's Phone (509) 376-4769			A. State Manifest Document No. B. State Generator's ID	
5. Transporter 1 Company Name U.S. Pollution Control Inc.	6. US EPA ID Number OKD981514474		C. State Transporter's ID D. Trans. Phone (405) 324-5011	
7. Transporter 2 Company Name	8. US EPA ID Number		E. F.	
9. Designated Facility Name and Site Address U.S. Pollution Control Inc.-Grassy Mt. Facility 3 mi. East, 7 mi. North of Exit 41 off I-80 Clive UT	10. US EPA ID Number UTD991301748		G. State Facility's ID H. Facility's Phone (801) 595-3900	

	11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM	12. Containers No.	Type	13. Total Qty	14. Unit Wt/Vol	I. Waste No.
a.	NON RCRA WASTE SOLID						
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above	K. Handling Codes for Wastes Listed Above
GM91-2090 - NON RCRA WASTE SOLID	

15. Special Handling Instructions and Additional Information

16. Generator's Certification
PLEASE BE SURE THE GENERATOR HAS SIGNED AND DATED IN THIS SECTION OF THE MANIFEST !!

* If Hazardous Waste N.O.S., must list two components that caused this waste to be hazardous.
Location of facility may require a State insignia upon the Manifest. Please check with the facility if not sure.

USPCI
A Subsidiary of
Union Pacific Corporation

CUSTOMER SERVICE
Grassy Mountain Facility

Fax: (801) 595-3994

[redacted] management system

To: Tom Wilczek

Fax #: 509-376-6476

Company: Westinghouse ENV. Div.

Date: 11/12/91

From: Chuck Lawrence

USPCI
Customer Service Representative

Number of sheets (including this one): 18

Comments: Thanks

Chuck

If fax is incomplete or illegible, please contact:

Chuck Lawrence at (801) 595-3997

NOTICE:
THE INFORMATION CONTAINED IN THIS FAX MESSAGE IS INTENDED ONLY FOR THE PERSONAL AND CONFIDENTIAL USE OF THE DESIGNATED RECIPIENTS NAMED ABOVE

This message may be an attorney-client communication, and as such is privileged and confidential. If the reader of this message is not the intended recipient or an agent responsible for delivering it to the intended recipient, you are hereby notified that you have received this document in error, and that any review, dissemination, distribution, or copying of this message is strictly prohibited. If you have received this communication in error, please notify the sender immediately by telephone and return the original to the sender by U.S. mail at our expense. Thank You!

WASTE STREAM ANALYSIS INFORMATION

A. Physical appearance
*Color
*Layering
*(PFLT) paint filter liquid test. To indicate free liquids.
*Free Liquid (Free Liq.) Physical inspection.

B. Radioactivity Screen (Radio Scr)
*Whether or not waste contains radioactivity

C. Reactive Cyanide Screen (RX CN Scr)
*Does waste produce hydrogen cyanide?

D. Reactive Sulfides Screen (RX S Sc)
*Does waste produce hydrogen sulfide?

E. Reducer Screen (Red. Scr)
*Determines reaction of compound with another. must be considered when determining compatibility of one waste with a reducing waste.

F. Solids Screen (T. Solids)
*This helps to determine if waste is the same as profiled.

G. Specific Gravity (Sp. Grav)
*Determines The sedimentation rate or buoyance of waste in suspension.

H. Water Reactivity (Water RX)
*Will waste react with water to form gases or generate heat.

I. Oxidizer Screen (OX. Scr.)
*An oxidizer is a substance that will chemically change another compound.

J. Normality (Normality)
*To test relative strenght of waste. Helps us determine how much reagent to use while approaching neutral ph.

K. Explosivity Meter Vapor Test (TLV)
*Used to indicate the fire producing potential of a waste.

L. Flash Point (Flash Pt)
*To indicate flashpoint level...(Determining D001 or not)

M. pH
*To indicate D002 code or not.

T-Solids at 91% - moisture and Free liquids are not the same thing. Moisture is released on Hot Plate 91% remains = 91% solid.

2.0 ANALYTICAL PARAMETERS AND RATIONALE

Analyses are provided by the laboratory to augment or verify pre-existing waste identifications, to comply with facility acceptance criteria and to assure compliance with land disposal restrictions. Analytical methods are classified as "Fingerprint Analyses" and "Additional Analyses." At a minimum, all wastes are subjected to the "Fingerprint Analyses" as a first step in the analytical protocol. "Additional Analyses" are performed according to need, or in some cases, may also be required analyses, as described in the Process Operations Procedures (Section 7.0). The General Manager may select these additional analyses to augment the mandatory screening or to provide operational control. This arrangement allows a tiered approach to waste identification, enabling USPCI to structure the analyses to adequately identify the waste or to define operational parameters for various treatment processes. The "Fingerprint Analyses" and "Unique Additional Analyses" have been developed to provide needed operational indications of the characteristics of a waste. The rationale and the procedures for these tests are given in Sections 2.0 and 3.0,

respectively. Other "Additional Analyses" described in this section are accepted standard techniques, and are found in the references cited in Section 3.0.

A summary of the analytical parameters within each category and their usage is provided herein. Analyses are not necessarily repeated for sequential activities or movement of the same waste within the facility unless required by changes in the character of the waste, in order to document compliance with the permit, or in order to establish compliance with the land disposal restrictions.

7.1 FINGERPRINT ANALYSES

Fingerprint Analyses include eleven basic screening procedures that are performed to provide a general characterization of the waste, and are used to indicate the type of treatment, storage, or disposal that is most suitable for that particular waste. Fingerprint Analyses are run on pre-acceptance samples and incoming load samples to allow for an expedient identification of waste movements. This procedure serves as a check that the waste shipped to the facility actually matches the waste originally profiled by

the generator to further ensure that a change in waste type has not occurred.

The parameters and associated rationale of the eleven Fingerprint Analyses are as follows:

1. Physical Appearance is used to determine the general identity of the waste. This facilitates subjective comparison of the waste with prior waste descriptions. It is also used to verify the presence or absence of free standing liquids.
2. pH Screen is undertaken to indicate the corrosive nature of the waste and indicate if the material might be a California List waste. pH may not apply to certain wastes (e.g.; organic solvent waste, oil waste, or solid waste).
3. Specific Gravity is important in determining the sedimentation rate or buoyance of wastes in suspension, as well as treatability in other process units.
4. Reactive Cyanides Screen indicates whether the

waste produces hydrogen cyanide (and might be a California List Waste) upon acidification below pH 2. It is not required if the pH of the waste is less than 6.0, if the waste is not water-soluble, or if the waste is not aqueous. Wastes containing total releasable cyanide with concentrations less than 250 ppm are considered non-reactive.

5. Reactive Sulfides Screen indicates whether the waste produces hydrogen sulfide upon acidification below pH 2. It is not required if the pH of the waste is less than 6.0, if the waste is not water-soluble, or if the waste is not aqueous. Waste containing total releasable sulfide with concentrations less than 500 ppm are considered non-reactive.

6. Water Reactivity Screen is used to determine whether the waste has a potential to vigorously react with water to form significant gases or solids, or whether it generates significant heat. This test is meant for gross

characterization of the waste only. This test does not apply to wastes which are already in contact with excess water, or for which sufficient data exist that indicate no potential reactivity with water.

7. Solids Screen is selected to determine solids management requirements.
8. Explosivity Meter Vapor Test (TLV Sniff) is used to indicate the fire-producing potential of the waste, and to indicate whether the waste might be a RCRA ignitable waste or regulated as flammable or combustible by the US DOT. This test can be applied to all waste liquids, semi solids or solids. The screen will be supplemented with the flash point test for those liquid materials exceeding 200 ppm if they are destined for the surface impoundment, land treatment, or landfill.
9. Radioactivity Screen is used to screen incoming material for signs of radioactivity.
10. Oxidizer Screen is a rapid qualitative method

for determining the presence or absence of oxidizing materials in liquid or semi-solid materials. It is also used to indicate if a material might be improperly identified (e.g.; not identified as D001 material).

11. Reducer Screen is a rapid qualitative method for determining the presence or absence of reducing materials in liquid or semi-solid materials. It is also used to indicate if a material might be improperly identified.

2.2 ADDITIONAL ANALYSES

Additional Analyses are performed to further identify wastes, as appropriate, and are run if the [illegible] Manager, site chemist, or...), hereinafter collectively referred to as the "General Manager," determines that further waste characterization is necessary or if required in Section 7.0. The results of these analyses provide the General Manager with another level of confidence concerning the proper means of treatment, storage and disposal. Some of these additional analyses

utilize unique procedures and protocols formulated particularly for the management of hazardous waste, which are preferable for waste characterization. Others are standard analytical techniques recognized by the US EPA and ASTM.

2.2.1. UNIQUE ADDITIONAL ANALYSES

Unique Additional Analyses are derived procedures which were developed to provide operational control over on-site processes. Again, these analyses are performed to further identify wastes and are run if the General Manager determines that further waste characterization is necessary or if required in Section 7.0 (Process Operations Procedures).

The applicability of these analyses, as described below, are based on procedures and protocol designated in this plan:

* Fixation Requirements is run to determine the ratio of reaction reagent(s)-to-waste (often referred to as the "recipe") required to effect stabilization.
* Cyanides - Peroxide Amenability determines the

effectiveness of H_2O_2 for cyanide treatment.

* Cyanides - Chlorination Amenability (Sodium Hypochlorite or direct Chlorination) is run to determine the effectiveness of hypochlorite for cyanide treatment.
* Cyanides - Conversion Amenability is tested to determine the effectiveness of other types of reagents treatment for cyanides.
* Liquid Waste Compatibility is tested to determine whether liquid wastes stored or processed together are compatible.
* Soluble Sulfides are analyzed to provide quantitative backup to the reactive sulfides screen.
* Sulfate Screen is to indicate sulfate presence, since a waste with high dissolved sulfates will have a tendency to precipitate.
* Sulfide - Peroxide Amenability determines the effectiveness of H_2O_2 for sulfide treatment.
* Distillation is used to determine the percent

recovery and boiling range of a sample, and to generate a distillate of the material suitable for further testing.

* **Ignitable Solids Screen** is used to indicate the fire-producing potential of a sample and is used as a backup or substitute test for the TLV Sniff. This test can be applied to all waste samples.
* **Normality** is used to define the amount of reagent or waste required to approach a neutral pH. The test is similar to the percent acidity and percent alkalinity tests, but the end point, to simulate operational practices, is at (or near) a pH of 7.
* **Methanol Extraction** is used to generate an extract for VOA analyses.

2.2.2 ANALYSES USING STANDARD TECHNIQUES

Analyses Using Standard Techniques are accepted procedures which provide operational control over on-site processes. These analyses are performed to further identify wastes and are run if the General Manager determines that

further waste characterization is necessary or if required in Section 7.0 (Process Operations Procedures).

The applicability of the following additional analytical procedures are based on ASTM and "Standard Methods" approved by EPA.

* Hexavalent Chromium is to quantify the concentration of this species for treatment control and to indicate if a waste might be a California List waste.
* Heavy Metals (As, Ba, Cd, Cr, Pb, Hg, Se, Ag) are run to quantify heavy metals concentration to determine process operating parameters and to indicate if a waste might be a California List waste.
* Miscellaneous Metals (Cu, Fe, Ca, Mg, Mn, Ni, Va, Zn) determine the potential for salt precipitation and is used for monitoring certain processes and to indicate if a waste might be a California List waste (in the case of Ni, only).
* PCBs are run to indicate whether PCBs are present in oil-bearing wastes, to ascertain their concentration, and to indicate if a waste might be a California List waste or a TSCA waste. (Note: This test uses the

"standard" Gas Chromatographic Method noted in Section 3.2.2.)

* pH provides a more precise measurement of pH and an indication of corrosivity when determining process parameters.
* Sulfates determines if the major acid component is sulfuric acid or its salts.
* Phosphates determines if the major acid component is phosphoric acid or its salts.
* Chlorides determines if the major acid component is hydrochloric acid or its salts.
* Nitrates determines if the major acid component is nitric acid or its salts.
* Free Cyanides measures the cyanides that would be potentially reactive under acid conditions and to indicate if a waste might be a California List Waste.
* Total Cyanides (Distillation with $MgCl_2$) quantifies the concentration of all free and complexed cyanides.
* Total Sulfides quantifies the concentration of total sulfide.
* Oil and Grease test is to quantify the amount of oil

and grease so as not to impact certain processes.

* Phenols quantifies the concentration of phenols.
* Total Residue quantifies the suspended and dissolved solids present and moisture content for selected processes.
* Filterable Residue quantifies the suspended solids present to determine if a liquid waste contains filterable solids and if it might be a wastewater for BDAT purposes (e.g., for the First Third List).
* Non-Filterable Residue quantifies the dissolved solids present to determine acceptability for certain processes.
* Specific Organic Compounds indicates the concentrations of specific organics and can be used to indicate if a waste might be a land disposal restricted waste.
* Flash Point further characterizes potentially ignitable wastes to establish proper management methods and to assure conformance with permit conditions. A closed cup is used for liquids, and an open cup for solids.

* Viscosity determines the pumpability of the waste.
* Elemental Analyses (including Cl) determine potential acid gas generation and incineration parameters.
* Water Content is to determine the amount of free water or indicate the combustibility of the waste.
* Heat Value (BTU) assesses organic wastes suitable as a fuel supplement.
* Percent Ash is used to estimate particulate generation, and inorganic solid residue for incineration or supplemental fuel systems control
* Priority Pollutant Scan checks for the presence of EPA priority pollutants (e.g., volatile organics, acid extracts, and base/neutral extracts).
* TR Scan may be run to provide a fingerprint spectrum of organic wastes.
* Paint Filter Liquids Test is used to determine if solid materials contain free liquids. Materials containing free liquids must be solidified or have the free liquids otherwise removed prior to landfilling, except as provided by regulation (e.g., labpacks, very small containers, etc...). Materials

not destined for landfilling (i.e., surface impoundment, tanks, land treatment), or are known to contain free liquids by visual examination do not require this test and may be noted as failing the test. The test is also used in indicating if a waste might be a California List waste.

* Toxicity Characteristics Leaching Procedure (TCLP) is used to determine the constituent concentration in waste extract (CCWE) levels. It is also used to develop leachates from some other waste samples to indicate if the material may potentially be a land disposal restricted material (e.g., First Third List).

* Total Organic Halides (TOH) is run to determine if a waste stream may contain Halogenated Organic Compounds (HOC's) and could be a California List waste, if a waste stream may be unacceptable for landfilling, or if a waste stream may be a candidate for fuels blending or incineration.

* Total Organic Carbon (TOC) is run to indicate if a

waste may contain CCWE restricted wastes or if a waste may be a wastewater for BDAT purposes (e.g., First Third List) it may also serve as a surrogate for other analyses (i.e., TOX, Solvent Scan, etc...). For example, where a TOX analysis is required to be less than a certain value, a TOC analysis below that value may be utilized since the organic carbon analysis is a more conservative value.

* Alkalinity determines the acidity in the waste to an endpoint of pH 3.7.
* Acidity determines the alkalinity in the waste to and endpoint of pH 8.3.
* Reactivity of Explosively Contaminated Soil and Sediment (Explosivity Test) is run to determine whether a contaminated soil or sediment is classified as reactive due to its explosive properties.
* Total Releasable (Reactive) Cyanides is run to determine whether a waste is reactive due to releasable cyanides above 250 mg/l.
* Total Releasable (Reactive) Sulfides is run to

determine whether a waste is reactive due to releasable sulfides above 500 mg/l.

5H-33-0451