



GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

Alan Matheson
Executive Director

DIVISION OF WASTE MANAGEMENT
AND RADIATION CONTROL
Scott T. Anderson
Director

A regular meeting of the Waste Management and Radiation Control Board has been scheduled for November 12, 2015 at 1:30 p.m. at the Department of Environmental Quality, Multi-Agency State Office Building, Conference Room #1015, 195 North 1950 West, SLC.
(One or more Board members may participate telephonically.)

AGENDA

- I. Call to Order.
- II. Introductions of Board Members.
- III. Election of Board Chairman and Vice-Chairman.
- IV. **Underground Storage Tanks Update..... Tab 1**
- V. Administrative Rules Tab 2
 - a. **Final adoption of proposed rule changes R315-15-18, Standards for the Management of Used Oil, Polychlorinated Biphenyls (PCBs), as published in the July 15, 2015 edition of the Utah State Bulletin (Board Action Item).**
- VI. Hazardous Waste Section Tab 3
 - a. **Proposed Stipulation and Consent Order between the Board and Emerald Services, Inc. (Board Action Item).**
 - b. **Clean Harbors, Grassy Mountain, LLC request for a site-specific treatment variance to stabilize a High Mercury – Subcategory Inorganic waste stream that has the characteristic waste code D009 (Board Action Item).**
- VII. Low Level Radioactive Waste Section Tab 4
 - a. **EnergySolutions, LLC request for a site-specific treatment variance from the Hazardous Waste Management Rules. EnergySolutions seeks authorization to receive Cemented Uranium Extraction Process Residues for disposal (Information Item Only).**

(Over)

VIII. Other Business.

- a. Misc. Information Items.
- b. Schedule of Board meetings.
- c. December Board meeting.

IX. Adjourn.

In compliance with the Americans with Disabilities Act, individuals with special needs (including auxiliary communicative aids and services) should contact Dana Powers, Office of Human Resources at (801) 499-2117 TDD (801) 903-3978 or by email at dpowers@utah.gov.

UST STATISTICAL SUMMARY
September 1, 2014 -- August 31, 2015

PROGRAM													
	September	October	November	December	January	February	March	April	May	June	July	August	(+/-) OR Total
Regulated Tanks	3,994	3,993	3,991	3,990	3,987	3,998	4,000	4,005	3,982	3,972	3,969	3,971	(23)
Tanks with Certificate of Compliance	3,908	3,907	3,917	3,917	3,908	3,906	3,904	3,914	3,906	3,893	3,893	3,889	(19)
Tanks without COC	86	86	74	73	79	92	96	91	76	79	76	82	(4)
Cumulative Facilities with Registered A Operators	1,348	1,348	1,346	1,344	1,341	1,339	1,340	1,341	1,336	1,331	1,330	1,330	97.79%
Cumulative Facilities with Registered B Operators	1,347	1,348	1,346	1,344	1,342	1,340	1,341	1,341	1,336	1,331	1,329	1,329	97.72%
New LUST Sites	11	7	4	3	12	8	4	4	7	6	8	14	88
Closed LUST Sites	12	10	11	2	12	12	10	10	2	12	13	10	116
Cumulative Closed LUST Sites	4736	4751	4759	4760	4770	4783	4794	4800	4805	4817	4824	4842	106
FINANCIAL													
	September	October	November	December	January	February	March	April	May	June	July	August	(+/-)
Tanks on PST Fund	2,907	2,908	2,909	2,911	2,901	2,893	2,891	2,891	2,884	2,870	2,867	2,860	(47)
PST Claims (Cumulative)	626	627	629	628	629	633	633	633	636	638	638	646	20
Equity Balance	-\$8,685,554	-\$8,544,394	-\$8,656,486	-\$8,990,620	-\$9,934,333	-\$9,141,111	-\$9,956,153	-\$9,282,773	-\$9,325,810	-\$9,241,227	-\$8,880,024	-\$9,079,617	(\$394,063)
Cash Balance	\$16,987,463	\$17,128,622	\$17,016,530	\$16,682,396	\$16,247,459	\$16,531,905	\$15,716,863	\$16,390,243	\$16,347,205	\$16,431,789	\$16,792,993	\$16,214,452	(\$773,011)
Loans	0	0	0	0	0	1	1	3	0	0	3	0	0
Cumulative Loans	96	96	96	96	97	98	99	102	102	102	105	105	9
Cumulative Amount	\$2,955,150	\$2,955,150	\$2,955,150	\$2,955,150	\$3,105,150	\$3,251,573	\$3,382,883	\$3,691,025	\$3,691,026	\$3,691,026	\$3,727,980	\$3,727,980	\$772,830
Defaults/Amount	0	0	0	0	0	0	0	0	0	0	0	0	0
	September	October	November	December	January	February	March	April	May	June	July	August	TOTAL
Speed Memos	36	58	32	29	36	29	34	36	28	51	34	34	437
Compliance Letters	9	8	9	6	3	8	8	7	3	4	6	5	76
Notice of Intent to Revoke	0	0	0	0	0	0	0	0	1	0	0	0	1
Orders	0	0	0	0	4	2	5	3	5	2	1	0	22

WASTE MANAGEMENT AND RADIATION CONTROL BOARD

Executive Summary

Final Adoption of Changes to R315-15-18

November 12, 2015

What is the issue before the Board?	Final adoption of proposed changes to Used Oil Rule R315-15-18 of the Utah Administrative Code.
What is the historical background or context for this issue?	<p>The used oil rules were modified in the fall of 2014. Following a review of the corresponding federal rules, the Director determined that the reference in R315-15-18 to certain concentrations of PCBs should be changed.</p> <p>Specifically, the federal rules regulating PCBs (40 CFR 761) have several levels of PCB concentrations and different requirements for each concentration. Used oil containing less than 50 ppm PCBs that is recycled in a manner other than being burned for energy recovery generally is excluded from TSCA requirements except for issues such as dilution. Used oil with a PCB concentration of 50 ppm or greater is regulated under TSCA and its use and disposal are restricted.</p> <p>Also, the proposed change to the rule clarifies that the assumptions in 40 CFR 761.2 of the concentration of PCBs and PCB items are appropriate while in use or stored for reuse but when the PCBs are disposed or stored for disposal, the actual PCB concentration must be known. The proposed change clarifies that the actual PCB concentration is obtained from laboratory analysis.</p> <p>The used oil rules adopted in 2014 specified 2 ppm where 50 ppm should have been specified.</p> <p>The draft rule changes were published in the July 15, 2015 <i>Utah State Bulletin</i> to begin the public comment period. <u>No comments were received</u></p>
What is the governing statutory or regulatory citation?	The Used Oil Act in 19-6-704(1) authorizes the Board to make rules for the management of used oil.
Is Board action required?	Yes
What is the Division Director's recommendation?	The Director recommends that the Board adopt the proposed rule changes and set an effective date of November 12, 2015.
Where can more information be obtained?	If you have any questions, please call Ralph Bohn at (801) 536-0212 or Deborah Ng at (801) 536-0218.

R315. Environmental Quality, Solid and Hazardous Waste.

R315-15. Standards for the Management of Used Oil.

R315-15-18. Polychlorinated Biphenyls (PCBs).

(a) Used oil containing polychlorinated biphenyl (PCB) concentrations of 50 ppm and above is subject to TSCA regulations in 40 CFR 761. Used oil containing PCB concentrations greater than or equal to 2 ppm but less than 50 ppm is subject to both R315-15 and 40 CFR 761.

(b) Used oil transporter PCB testing. Used oil transporters shall determine ~~whether~~ the PCB content of used oil being transported is less than ~~2~~50 ppm prior to transferring the oil into the transporter's vehicles. The transporter shall make this determination as follows:

(1) Used dielectric oil. Dielectric oil used in transformers and other high voltage devices shall be certified to be less than ~~2~~50 ppm prior to loading to the transporter's vehicle through ~~either:~~
~~——(A) Laboratory~~laboratory testing following the procedures described in R315-15-18(d) ~~[below, or~~
~~——(B) Written certification from the generator that the PCB content of the used oil is less than 2 ppm~~ PCBs based on manufacturing specifications and process knowledge].

(2) Other used oils ~~[historically containing PCBs. Used oils that have historically contained PCBs, including high pressure hydraulic oils, capacitors, heat transfer fluids, oil cooled electric motors, and lubricants]~~ shall be certified to be less than ~~2~~50 ppm prior to transfer through either:

(A) Laboratory testing following the procedures described in R315-15-18(d) below, or

(B) Written certification from the generator that the PCB content of the used oil is less than 50 ppm ~~[2 ppm PCBs]~~ based on manufacturing specifications and process knowledge.

~~——(3) Used oils not falling into categories described under (1) and (2) above are not required to be tested for PCBs under R315-15-18(b).~~

(c) Used oil marketer PCB testing. To ensure that used oil destined to be burned for ~~burning~~energy recovery is not a regulated waste under the TSCA regulations, used oil fuel marketers shall ~~also~~ determine whether the PCB content of used oil being burned for energy recovery is below 2 ppm. A marketer shall make this determination in a manner consistent with the used oil marketer's sampling and analysis plan.

(d) Laboratory testing for PCBs. Used oil testing for total PCBs shall include the following Aroclors ~~[(registered trademark)]~~: 1016, 1221, 1232, 1242, 1248, 1254, and 1260. If plasticizers (used in polyvinyl chloride plastic, neoprene, chlorinated rubbers, laminating adhesives, sealants and caulk and joint compounds etc.) are present, then the used oil shall also be analyzed for Aroclors ~~[(registered trademark)]~~ 1262 and 1268. If other Aroclors ~~[(registered trademark)]~~ are known or suspected to be present, then the used oil shall be analyzed for those additional Aroclors ~~[(registered trademark)]~~.

(e) The following Utah Certified Laboratory SW-846 methodologies shall be used for PCBs:

(1) Preparation method 3580A, clean up method 3665A, and analytical method 8082A.

(2) Individual Aroclors ~~[(registered trademark)]~~ shall be reported with a reporting limit of 1 ppm or less.

(3) If the source of the PCBs is known to be an Aroclor ~~[(registered trademark)]~~, and the Aroclor ~~[(registered trademark)]~~ is unlikely to be significantly altered in homologue composition such as weathering, Aroclors ~~[(registered trademark)]~~ listed in R315-15-18(d) shall be reported. Analytical results from all 209 individual congeners or ten homologue groups shall be submitted for any sample that has an altered homologue composition such as weathering unless prior approval is obtained from the Director.

KEY: hazardous waste, used oil

Date of Enactment or Last Substantive Amendment: ~~[October 3, 2014]~~2015

Notice of Continuation: May 17, 2012

Authorizing, and Implemented or Interpreted Law: 19-6-704

NOTICE OF
PROPOSED RULE AMENDMENT

- The agency identified below in box 1 provides notice of proposed rule change pursuant to Utah Code Section 63G-3-301 and Subsection 53C-1-201(3)(c).
- Please address questions regarding information on this notice to the agency.
- The full text of all rule filings is published in the Utah State Bulletin unless excluded because of space constraints.
- The full text of all rule filings may also be inspected at the Division of Administrative Rules.

Agency Information

1. Agency: Environmental Quality - Solid and Hazardous Waste
 Room no.: Second Floor
 Building:
 Street address 1: 195 N 1950 W
 Street address 2:
 City, state, zip: SALT LAKE CITY UT 84116-3097
 Mailing address 1: PO BOX 144880
 Mailing address 2:
 City, state, zip: SALT LAKE CITY UT 84114-4880

Contact person(s):

Name:	Phone:	Fax:	E-mail:
Ralph Bohn	801-536-0212	801-536-0222	rbohn@utah.gov

(Interested persons may inspect this filing at the above address or at DAR during business hours)

Rule Information

DAR file no: 39459 Date filed: 06/23/2015 08:10 AM
 State Admin Rule Filing Key: 156297
 Utah Admin. Code ref. (R no.): R 315 - 15 - 18
 Changed to Admin. Code ref. (R no.): - -

Title

2. Title of rule or section (catchline):
 Polychlorinated Biphenyls (PCBs)

Notice Type

3. Type of notice: Amendment

Rule Purpose

4. Purpose of the rule or reason for the change:
 The reasons for the changes are: 1) to correct PCB concentration limits to reflect concentration limits found under federal rules; 2) to remove option to use generator knowledge for Dielectric oil that is not allowed in federal rule; 3) to require testing or generator knowledge for all other oils as required by federal rule; and 4) to reword some sections of the rule to make them clearer.

Response Information

5. This change is a response to comments by the Administrative Rules Review Committee.
 No

Rule Summary

6. Summary of the rule or change:

Rule changes PCB concentration limit allowed to be present in used oil from 2 ppm to 50 ppm. The option to use generator knowledge for Dielectric oil is removed. The rule change clarifies that testing or generator knowledge is required to certify PCB concentrations in all other oils. The rule change also changes the wording of the generator certification to make it clearer.

Aggregate Cost Information

7. Aggregate anticipated cost or savings to:

A) State budget:

Affected: No

There will not be any affect on the state budget as this change does not change how the used oil program is administered. The change that requires testing for Dielectric oil is a correction of the rule to bring it in line with federal rule and has no cost as the requirement existed and the change only aligns the Utah rule with federal rules.

B) Local government:

Affected: No

Local governments that generate used oil will not change their activities and will not have any cost increase or savings. The change that requires testing for Dielectric oil is a correction of the rule to bring it in line with federal rule and has no cost as the requirement existed and the change only aligns the Utah rule with federal rules.

C) Small businesses:

Affected: No

("small business" means a business employing fewer than 50 persons)

Small businesses that generate used oil will not change their activities and will not have any cost increase or savings. The change that requires testing for Dielectric oil is a correction of the rule to bring it in line with federal rule and has no cost as the requirement existed and the change only aligns the Utah rule with federal rules.

D) Persons other than small businesses, businesses, or local government entities:

Affected: No

("person" means any individual, partnership, corporation, association, governmental entity, or public or private organization of any character other than an agency)

Others that generate used oil will not change their activities and will not have any cost increase or savings. The change that requires testing for Dielectric oil is a correction of the rule to bring it in line with federal rule and has no cost as the requirement existed and the change only aligns the Utah rule with federal rules.

Compliance Cost Information

8. Compliance costs for affected persons:

The rule change will not affect the handling of used oil by any person and will have no cost increase or savings. The change that requires testing for Dielectric oil is a correction of the rule to bring it in line with federal rule and has no cost as the requirement existed and the change only aligns the Utah rule with federal rules.

Department Head Comments

9. A) Comments by the department head on the fiscal impact the rule may have on businesses:

The rule change will not affect the handling of used oil by any person and will have no cost increase or savings. The change that requires testing for Dielectric oil is a correction of the rule to bring it in line with federal rule and has no cost as the requirement existed in federal rule and the change only aligns the Utah rule with federal rules.

B) Name and title of department head commenting on the fiscal impacts:

Alan Matheson, Acting Executive Director

Citation Information

10. This rule change is authorized or mandated by state law, and implements or interprets the following state and federal laws.

State code or constitution citations (required) (e.g., Section 63G-3-402; Subsection 63G-3-601(3); Article IV) :
Section 19-6-704

Incorporated Materials

11. This rule adds, updates, or removes the following title of materials incorporated by references (a copy of materials incorporated by reference must be submitted to DAR; if none, leave blank) :

Official Title of Materials Incorporated (from title page):
 Publisher:
 Date Issued:
 Issue, or version:
 ISBN Number:
 ISSN Number:
 Cost of Incorporated Reference:
 Adds, updates, removes:

Comments

12. The public may submit written or oral comments to the agency identified in box 1. (The public may also request a hearing by submitting a written request to the agency. The agency is required to hold a hearing if it receives requests from ten interested persons or from an association having not fewer than ten members. Additionally, the request must be received by the agency not more than 15 days after the publication of this rule in the Utah State Bulletin. See Section 63G-3-302 and Rule R15-1 for more information.)

A) Comments will be accepted until 5:00 p.m. on (mm/dd/yyyy) :

11/05/2015

B) A public hearing (optional) will be held:

On (mm/dd/yyyy): At (hh:mm AM/PM): At (place):

Proposed Effective Date

13. This rule change may become effective on (mm/dd/yyyy): 11/12/2015

NOTE: The date above is the date on which this rule MAY become effective. It is NOT the effective date. After a minimum of seven days following the date designated in Box 12(A) above, the agency must submit a Notice of Effective Date to the Division of Administrative Rules to make this rule effective. Failure to submit a Notice of Effective Date will result in this rule lapsing and will require the agency to start the rulemaking process over.

Indexing Information

14. Indexing information - keywords (maximum of four, in lower case, except for acronyms (e.g., "GRAMA") or proper nouns (e.g., "Medicaid")):

hazardous waste
used oil

File Information

15. Attach an RTF document containing the text of this rule change (filename):

There is a document associated with this rule filing.

To the Agency

Information requested on this form is required by Sections 63G-3-301, 302, 303, and 402. Incomplete forms will be returned to the agency for completion, possibly delaying publication in the Utah State Bulletin, and delaying the first possible effective date.

Agency Authorization

Agency head or designee, and title:

Scott Anderson Director

Date (mm/dd/yyyy): 06/23/2015

UTAH WASTE MANAGEMENT AND RADIATION CONTROL BOARD

Executive Summary

Emerald Services Inc. – Stipulation and Consent Order

November 12, 2015

What is the issue before the Board?	This is a proposed Stipulation and Consent Order (SCO) to resolve Notice of Violation and Compliance Order (NOV/CO) No. 1307015 issued to Emerald Services Inc. on April 24, 2013.
What is the historical background or context for this issue?	<p>Emerald Services is an environmental services company with facilities located at 2450 South 800 West and 650 West 500 South in Salt Lake City, Utah. Emerald Services collects, processes, stores and markets used oil under the provisions of R315-15 of the Utah Administrative Code and State-issued Permits UOP-090, UOP-084, UOP-087 and Marketer Registration UOR-077. The NOV/CO is included in the Board packet. All violations cited in the NOV have been corrected by the facility.</p> <p>The SCO includes a penalty of \$73,274.00. Emerald will pay \$26,782.00 in cash and the remaining amount will be separated into two Supplemental Environmental Projects (SEPs) totaling \$46, 492.00. The SEPs are:</p> <ol style="list-style-type: none">1. Installation of a remote level monitoring system for the bulk used oil storage tanks in Tank Farm #1.2. A donation made to the Utah Public Health Laboratory for new laboratory equipment to process environmental samples.
What is the governing statutory or regulatory citation?	Used Oil Management Act, 19-6-704, Powers and Duties of the Board. Used Oil Management Act, 19-6-721, Violation-Proceedings-Orders. Standards for the Management of Used Oil, R315-15.
Is Board action required?	Yes. The public comment for this SCO commenced on June 11, 2015 and ended on July 10, 2015. No public comments were received.
What is the Division Director's recommendation?	The Director recommends the SCO with Emerald Services be approved.
Where can more information be obtained?	For technical questions, please call Michelle Weis at (801) 536-0256. For legal questions, please call Raymond Wixom, Assistant Attorney General, at (801) 536-0213.

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In the Matter of:	:	STIPULATION AND CONSENT ORDER
	:	
EMERALD SERVICES INC.	:	No. 1307017
UTR000007831 and UTR000008201	:	

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This STIPULATION AND CONSENT ORDER is issued by the Director of the Division of Waste Management and Radiation Control pursuant to the Used Oil Management Act (the Act), Utah Code Ann. §19-6-721, *et seq.*

JURISDICTION

1. The Director has jurisdiction over the subject matter of this CONSENT ORDER pursuant to 19-6-721 of the Utah Code Annotated and jurisdiction over Emerald Services, Inc.
2. The Waste Management and Radiation Control Board has authority to review this CONSENT ORDER pursuant to Utah Code Ann. §19-6-104(1)(f) and jurisdiction over Emerald Services Inc.

FINDINGS

3. Emerald Services is a Utah corporation licensed to do business in Utah. Emerald Services operates a facility at 2450 South 800 West in Salt Lake City, Utah where it processes, markets and transports used oil. Emerald Services also operates a transfer facility at 650 West 500 South in Salt Lake City, Utah for storage and transportation of used oil.
4. Emerald Services is a “person” as defined in Utah Code Ann. §19-6-103(4) and is subject to all applicable provisions of the Utah Administrative Code and the Act.
5. Emerald Services operates under the provisions of the Act, R315 of the Utah Administrative Code, State-issued Permits UOP-090, UOP-084, UOP-087 and Registration UOR-077.
6. Authorized representatives of the Director conducted compliance evaluation inspections at the Emerald Services facilities between June 25, 2013 and September 24, 2013.
7. Based on the findings documented during the inspections, Notice of Violation and Compliance Order No. 1307015 (NOV/CO) was issued to Emerald Services on April 25, 2014.

STIPULATION AND CONSENT ORDER

8. The parties now wish to resolve the NOV/CO without further administrative or judicial proceedings.
9. In full settlement of the violations alleged in NOV/CO No. 1307015, Emerald Services Inc. shall pay a penalty of \$73,274.00 as follows:
 - a. A cash payment of \$26,782.00 shall be paid to the State of Utah Department of Environmental Quality c/o Scott T. Anderson, Director, Division of Waste Management

and Radiation Control, P.O. Box 144880, Salt Lake City, Utah 84114-4880 in three payments as follows:

- 1) Payment 1- \$8,928.00 within 60 days of entry into this SCO.
- 2) Payment 2- \$8,927.00 within 90 days of entry into this SCO.
- 3) Payment 3- \$8,927.00 within 120 days of entry into this SCO.

b. A credit of \$46,492.00 shall be applied toward Emerald's penalty for two Supplemental Environmental Projects as follows.

- 1) SEP 1: Emerald shall, within 30 days of entry into this SCO, make a donation of \$20,000.00 to the Utah Public Health Laboratory, Utah Department of Health, under Utah Code Ann. § 26-1-16, c/o Scott T. Anderson, Director, Division of Waste Management and Radiation Control, P.O. Box 144880, Salt Lake City, Utah 84114-4880.
- 2) SEP 2: Emerald shall, within 365 days of entry into this SCO, install a remote tank level monitoring system for the bulk storage tanks at Emerald's Salt Lake City facility at a cost of at least \$26,492.00.

10. Within 60 days of completion of each SEP, Emerald shall submit to the Director written notice that the SEP has been completed. The written notice shall include documentation of funds expended.
11. If Emerald fails to complete the SEPs within the time specified for each SEP, Emerald shall pay to the Director the amount of money credited toward the penalty for any remaining SEP monies up to \$46,492.00.
12. If the SEPs have been completed as required but the amount of money credited toward the penalty for the SEPs has not been fully expended, Emerald shall pay any remaining unexpended SEP money to the Director.
13. This amount has been determined in accordance with the Board's Civil Penalty Policy (R315-102 of the Utah Administrative Code) which considers such factors as the gravity of the violations, the extent of deviation from the rules, the potential for harm to human health and the environment, good faith efforts to comply and other factors.

EFFECT OF CONSENT ORDER

For the purpose of this CONSENT ORDER, the parties agree and stipulate to the above stated facts. The stipulations contained herein are for the purposes of settlement and shall not be considered admissions by any party and shall not be used by any person related or unrelated to this CONSENT ORDER for purposes other than determining the basis of this CONSENT ORDER. Nothing contained herein shall be deemed to constitute a waiver by the State of its right to initiate enforcement action, including civil penalties, against Emerald Services in the event of future non-compliance with this CONSENT ORDER, with the Act, with the Utah Administrative Code or with the Permit; nor shall the State be precluded in any way from taking appropriate action should such a situation arise again at Emerald Services. However, entry into this CONSENT ORDER shall relieve Emerald Services of all liability for violations which did arise or could have arisen with respect to the allegations contained in the NOV/CO.

EFFECTIVE DATE

This CONSENT ORDER shall become effective upon execution by Emerald Services Inc. and the Director.

Dated this _____ day of _____, 2015

Emerald Services Inc.

Division of Waste Management and Radiation
Control

J. Stephan Banchemo, Jr.
President and CEO

Scott T. Anderson, Director

**Narrative Explanation to Support
Penalty Amount for Proposed Stipulation and Consent Order
Emerald Services Inc.**

Total Proposed Penalty Amount: \$73,274.00

NOV # 1307015 SCO # 1307017

Violation Number 1

Description: Failure to properly label and maintain used oil storage tanks in Tank Farm #1.

1. Gravity Based Penalty: \$600.00

(a) **Potential for Harm - Moderate**

Mislabeling of tanks poses a moderate risk to first responders because they are unable to properly identify the material stored in the tank and respond appropriately in the event of a release. Even though secondary containment was in place, two of the tanks had leaks that could have exceeded the secondary containment capacity.

(b) **Extent of Deviation – Minor**

Only one of nineteen tanks was mislabeled and only two tanks had leaks.

(c) **Multi-Day – NA**

2. Adjustment Factors: \$60.00

(a) Good faith - NA

(b) Willfulness/Negligence - NA

(c) History of Noncompliance - NA

(d) Ability to pay - NA

(e) Other Unique Factors - NA

3. Economic Benefit: Considered but not applied due to difficulty in calculating benefit.

4. Recalculation of Penalty based on New Information: NA

Violation 1 Penalty Total: \$ 600.00

**Narrative Explanation to Support
Penalty Amount for Proposed Stipulation and Consent Order
Emerald Services Inc.**

NOV # 1210011 SCO # 1307017

Violation Number 2

Description: Storage of used oil without a permit. Improper storage of used oil outside of permitted storage area (Tank Farm # 1).

1. Gravity Based Penalty: \$800.00

(a) **Potential for Harm – Minor**

The majority of the used oil processed through the facility was stored in the tank farm as required by the Permit.

(b) **Extent of Deviation - Major**

Emerald Services did not have a Permit to store oil outside of the permitted used oil storage area.

(c) **Multi-Day - 179 days at \$60 per day: \$10,740.00**

Baker tanks were used to store used oil in the parking lot from November 8, 2012 through June 21, 2013.

2. Adjustment Factors: \$1,154.00

(a) Good faith - NA

(b) Willfulness/Negligence - Ten percent increase: Emerald Services was aware of the requirement to modify its permit to store additional used oil outside of Tank Farm# 1.

(c) History of Noncompliance - NA

(d) Ability to pay - NA

(e) Other Unique Factors - NA

3. Economic Benefit: Considered but not applied to avoid disproportionately high penalty.

4. Recalculation of Penalty based on New Information: NA

Violation 2 Penalty TOTAL: \$ 12,694.00

**Narrative Explanation to Support
Penalty Amount for Proposed Stipulation and Consent Order
Emerald Services Inc.**

NOV # 1210011 SCO # 1307017

Violation Number 3

Description: Failure to provide written report to the Division for used oil spill over 25 gallons.

1. Gravity Based Penalty: \$600.00

(a) **Potential for Harm - Minor**

The spill was reported orally within 24 hours to the Division and immediately addressed by the facility.

(b) **Extent of Deviation - Major**

The facility did not provide a written report as required.

(c) **Multi-Day - NA**

2. Adjustment Factors:

(a) Good faith - NA

(b) Willfulness/Negligence - NA

(c) History of Noncompliance - NA

(d) Ability to pay - NA

(e) Other Unique Factors - NA

3. Economic Benefit: Considered but not applied; benefit negligible.

4. Recalculation of Penalty based on New Information: NA

Violation 3 Penalty TOTAL: \$600.00

**Narrative Explanation to Support
Penalty Amount for Proposed Stipulation and Consent Order
Emerald Services Inc.**

NOV # 1210011 SCO # 1307017

Violation Number 4

Description: Failure to store, manage, transport, report and document oily water as used oil when sent for recovery.

1. Gravity Based Penalty: \$800.00

(a) **Potential for Harm - Minor**

The oily water was stored in tanks with secondary containment at Tank Farm # 1. The oily water contained only a small percentage of recoverable oil.

(b) **Extent of Deviation - Major**

Oily water was not managed, stored, reported or tracked as required by the permit.

(c) **Multi-Day - 179 days at \$60 per day: \$10,740.00**

Facility records showed that oily water was not managed properly for at least 180 days.

2. Adjustment Factors:

(a) Good faith - NA

(b) Willfulness/Negligence - NA

(c) History of Noncompliance - NA

(d) Ability to pay - NA

(e) Other Unique Factors - NA

3. Economic Benefit: Considered but not applied due to difficulty in calculating benefit.

4. Recalculation of Penalty based on New Information: NA

Violation 4 Penalty TOTAL: \$ 11,540.00

**Narrative Explanation to Support
Penalty Amount for Proposed Stipulation and Consent Order
Emerald Services Inc.**

NOV # 1210011 SCO # 1307017

Violation Number 5

Description: Delivery of used oil to an unpermitted used oil processor.

1. Gravity Based Penalty: \$1,600.00

(a) Potential for Harm - Moderate

The used oil was delivered to a facility that was not complying with the standards that would have protected human health and the environment. For example, the inspector observed that most of the Renegade Oil property where employees were walking was contaminated with used oil. Renegade Oil's used oil storage tanks were not properly labeled and it had no fire suppression system. The local fire department was not aware of the storage of oil at the facility. Processing equipment was not properly vented for the gaseous vapors to atmosphere nor had the processing system been inspected or permitted by DSHW or DAQ.

(b) Extent of Deviation - Minor

Most of the used oil was shipped to a permitted used oil processor.

Multi-Day - NA

2. Adjustment Factors:

- (a) Good faith - NA
- (b) Willfulness/Negligence - NA
- (c) History of Noncompliance - NA
- (d) Ability to pay - NA
- (e) Other Unique Factors - NA

3. Economic Benefit: Renegade Oil avoided the costs of obtaining a permit, not Emerald.

4. Recalculation of Penalty based on New Information: NA

Violation 5 Penalty TOTAL: \$1,600.00

**Narrative Explanation to Support
Penalty Amount for Proposed Stipulation and Consent Order
Emerald Services Inc.**

NOV # 1210011 SCO # 1307017

Violation Number 6

Description: Exceeded the permitted limit of two rail cars for storing used oil at the Emerald Transfer Facility.

1. Gravity Based Penalty: \$200.00

- (a) **Potential for Harm - Minor**
The rail cars were in good condition and the used oil was managed properly.
- (b) **Extent of Deviation - Minor**
Emerald complied with the storage requirements most of the time.
- (c) **Multiple Events** – Five @ \$200 = \$1,000.00

2. Adjustment Factors:

- (a) Good faith - NA
- (b) Willfulness/Negligence - NA
- (c) History of Noncompliance - NA
- (d) Ability to pay - NA
- (e) Other Unique Factors - NA

3. Economic Benefit: Considered but not applied due to difficulty in calculating benefit.

4. Recalculation of Penalty based on New Information: NA

Violation 6 Penalty TOTAL: \$ 1,000.00

**Narrative Explanation to Support
Penalty Amount for Proposed Stipulation and Consent Order
Emerald Services Inc.**

NOV # 1210011 SCO # 1307017

Violation Number 7

Description: Failure to increase financial assurance amount after increasing storage capacity at Transfer Facility.

1. Gravity Based Penalty:

- (a) **Potential for Harm**
- (b) **Extent of Deviation**
- (c) **Multiple Days**

2. Adjustment Factors:

- (a) Good faith
- (b) Willfulness/Negligence
- (c) History of Noncompliance
- (d) Ability to pay
- (e) Other Unique Factors

3. Economic Benefit:

4. Recalculation of Penalty based on New Information: NA

Violation 7 Penalty TOTAL: \$0 - Penalty not appropriate due to the State's review of the modification request; error not discovered prior to approval.

**Narrative Explanation to Support
Penalty Amount for Proposed Stipulation and Consent Order
Emerald Services Inc.**

NOV # 1210011 SCO # 1307017

Violation Number 8

Description: Failure to submit Used Oil Annual reports before March 1 of reporting year for Emerald's three used oil permits.

1. Gravity Based Penalty: \$100.00

- (a) **Potential for Harm - Minor**
Late submittal of used oil reports posed minor risk to human health and the environment.
- (b) **Extent of Deviation - Minor**
The facility did submit reports as required but they were late.
- (c) **Multiple Events - Three events @ \$100 = \$300.00**

2. Adjustment Factors:

- (a) Good faith - NA
- (b) Willfulness/Negligence - NA
- (c) History of Noncompliance - NA
- (d) Ability to pay - NA
- (e) Other Unique Factors - NA

3. Economic Benefit: Considered by not applied; negligible benefit.

4. Recalculation of Penalty based on New Information:

Violation 8 Penalty TOTAL: \$ 300.00

**Narrative Explanation to Support
Penalty Amount for Proposed Stipulation and Consent Order
Emerald Services Inc.**

NOV # 1210011 SCO # 1307017

Violation Number 9

Description: Storage of used oil in rail cars in excess of 35 days without obtaining a processor permit.

1. Gravity Based Penalty: \$100.00

- (a) **Potential for Harm - Minor**
The oil was contained in the rail cars and was otherwise properly managed.
- (b) **Extent of Deviation - Minor**
The facility complies with the storage requirements most of the time.
- (c) **Multiple Events - Eight events @ \$100 = \$800.00**

2. Adjustment Factors:

- (a) Good faith - NA
- (b) Willfulness/Negligence - NA
- (c) History of Noncompliance - NA
- (d) Ability to pay - NA
- (e) Other Unique Factors - NA

3. Economic Benefit: Considered by not applied. The company could not have obtained a processing permit for this location.

4. Recalculation of Penalty based on New Information:

Violation 9 Penalty TOTAL: \$ 800.00

**Narrative Explanation to Support
Penalty Amount for Proposed Stipulation and Consent Order
Emerald Services Inc.**

NOV # 1210011 SCO # 1307017

Violation Number 10

Description: Failure to have two employees present during unloading of used oil at rail yard.

1. Gravity Based Penalty

- (a) **Potential for Harm -**
- (b) **Extent of Deviation -**

2. Adjustment Factors:

- (a) Good faith - NA
- (b) Willfulness/Negligence - NA
- (c) History of Noncompliance
- (d) Ability to pay - NA
- (e) Other Unique Factors - NA

3. Economic Benefit: .

4. **Recalculation of Penalty based on New Information:** \$0.00 – Permittee submitted information that documents compliance.

Violation 10 Penalty TOTAL: \$0.00

**Narrative Explanation to Support
Penalty Amount for Proposed Stipulation and Consent Order
Emerald Services Inc.**

NOV # 1210011 SCO # 1307017

Violation Number 11

Description: Burning other businesses' used oil that was untested in the facility's used oil heater.

1. Gravity Based Penalty: \$1,500.00

(a) **Potential for Harm - Moderate**

Untested used oil could contain heavy metals or PCBs, which could impact the health of workers and businesses nearby.

(b) **Extent of Deviation - Minor**

The facility complies with this requirement the majority of the time.

(c) **Multi-Day - NA**

2. Adjustment Factors:

(a) Good faith - NA

(b) Willfulness/Negligence - NA

(c) History of Noncompliance - NA

(d) Ability to pay - NA

(e) Other Unique Factors - NA

3. Economic Benefit: Considered but not applied; negligible benefit.

4. Recalculation of Penalty based on New Information: NA

Violation 11 Penalty TOTAL: \$1,500.00

**Narrative Explanation to Support
Penalty Amount for Proposed Stipulation and Consent Order
Emerald Services Inc.**

NOV # 1210011 SCO # 1307017

Violation Number 12

Description: Failure to have used oil analyzed by a Utah-certified laboratory before marketing and transporting as on-specification oil.

1. Gravity Based Penalty: \$2,000.00

- (a) **Potential for Harm - Moderate**
Without using a laboratory certified by the State of Utah, quality of the data cannot be verified.
- (b) **Extent of Deviation - Moderate**
The Permit requires that all rail cars and tanks be sampled and analyzed by a Utah-certified laboratory to determine if used oil meets specification prior to shipping. Many rail shipments had proper testing.
- (c) **Multiple Events** – Fifteen events @ \$2,000 = \$30,000.00

2. Adjustment Factors:

- (a) Good faith - NA
- (b) Willfulness/Negligence - NA
- (c) History of Noncompliance - NA
- (d) Ability to pay - NA
- (e) Other Unique Factors - NA

3. Economic Benefit: Considered but not applied; benefit negligible; facility still incurred analytical costs.

4. Recalculation of Penalty based on New Information: NA

Violation 12 Penalty TOTAL: \$30,000.00

**Narrative Explanation to Support
Penalty Amount for Proposed Stipulation and Consent Order
Emerald Services Inc.**

NOV # 1210011 SCO # 1307017

Violation Number 13

Description: Failure to screen used oil for halogens prior to collection.

1. Gravity Based Penalty: \$1,200.00

(a) **Potential for Harm - Moderate**

Used oil could be contaminated with hazardous waste. If the driver does not test prior to loading the oil, then resulting mixture could contaminate the entire load.

(b) **Extent of Deviation - Minor**

The Permit requires loads to be screened for halogens prior to collection. Drivers screened the majority of loads.

(c) **Multi-Day - NA**

2. Adjustment Factors:

(a) Good faith - NA

(b) Willfulness/Negligence - NA

(c) History of Noncompliance - NA

(d) Ability to pay - NA

(e) Other Unique Factors - NA

3. Economic Benefit: Considered but not applied; benefit negligible.

4. Recalculation of Penalty based on New Information: NA

Violation 13 Penalty TOTAL: \$1,200.00

**Narrative Explanation to Support
Penalty Amount for Proposed Stipulation and Consent Order
Emerald Services Inc.**

NOV # 1210011 SCO # 1307017

Violation Number 14

Description: Transportation of used oil in unpermitted used oil collection vehicles.

1. Gravity Based Penalty: \$40.00

(a) Potential for Harm - Minor

Unpermitted used oil collection vehicles were operated in accordance Permit requirements for used oil collection vehicles.

(b) Extent of Deviation - Minor

The majority of vehicles were properly permitted.

2. Adjustment Factors:

(a) Good faith - NA

(b) Willfulness/Negligence - NA

(c) History of Noncompliance NA

(d) Ability to pay - NA

(e) Other Unique Factors - NA

3. Economic Benefit:

4. Recalculation of Penalty based on New Information: NA

Violation 14 Penalty TOTAL: \$40.00

**Narrative Explanation to Support
Penalty Amount for Proposed Stipulation and Consent Order
Emerald Services Inc.**

NOV # 1210011 SCO # 1307017

Violation Number 15

Description: Shipping used oil off-site using a transporter without an EPA ID number.

1. Gravity Based Penalty:

- (a) **Potential for Harm**
- (b) **Extent of Deviation**
- (c) **Multi-Day**

2. Adjustment Factors:

- (a) Good faith
- (b) Willfulness/Negligence
- (c) History of Noncompliance
- (d) Ability to pay
- (e) Other Unique Factors

3. Economic Benefit:

4. Recalculation of Penalty based on New Information

Violation 15 Penalty TOTAL: \$0 - Subsequent information documented that the used oil transporter did have an EPA ID number from Washington State.

**Narrative Explanation to Support
Penalty Amount for Proposed Stipulation and Consent Order
Emerald Services Inc.**

NOV # 1210011 SCO # 1307017

Violation Number 16

Description: Failure to modify permits.

1. Gravity Based Penalty: \$3,200.00

(a) **Potential for Harm - Moderate**

Failure to modify the permit prevented the regulatory agency from imposing appropriate protective standards.

(b) **Extent of Deviation - Major**

The permits were not modified as required.

(c) **Multi-Day - NA**

2. Adjustment Factors:

(a) Good faith - NA

(b) Willfulness/Negligence - NA

(c) History of Noncompliance - NA

(d) Ability to pay - NA

(e) Other Unique Factors - NA

3. Economic Benefit: Considered but not applied; benefit negligible.

4. Recalculation of Penalty based on New Information: NA

Violation 16 Penalty TOTAL: \$3,200.00

**Narrative Explanation to Support
Penalty Amount for Proposed Stipulation and Consent Order
Emerald Services Inc.**

NOV # 1210011 SCO # 1307017

Violation Number 17

Description: Failure to train used oil drivers to correctly screen for halogens with Clor-D-Tect Kit.

1. Gravity Based Penalty: \$3,200.00

- (a) **Potential for Harm - Moderate**
Incorrectly screening used oil increases the risk of used oil not being managed as a hazardous waste.
- (b) **Extent of Deviation - Major**
None of the facility drivers could successfully complete a Halogen screening during the inspection.
- (c) **Multi-Day - NA**

2. Adjustment Factors:

- (a) Good faith - NA
- (b) Willfulness/Negligence - NA
- (c) History of Noncompliance - NA
- (d) Ability to pay - NA
- (e) Other Unique Factors - NA

3. Economic Benefit: Considered but not applied due to difficulty in calculating benefit.

4. Recalculation of Penalty based on New Information: NA

Violation 17 Penalty TOTAL: \$3,200.00

**Narrative Explanation to Support
Penalty Amount for Proposed Stipulation and Consent Order
Emerald Services Inc.**

NOV # 1210011 SCO # 1307017

Violation Number 18

Description: Failure to document the training of three employees.

1. Gravity Based Penalty: \$200.00

- (a) **Potential for Harm - Minor**
Most employees had been trained to manage used oil.
- (b) **Extent of Deviation - Minor**
Training documentation was available for most of the facility employees.
- (c) **Multiple Event - Three Events @ \$200.00 = \$600.00**

2. Adjustment Factors:

- (a) Good faith - NA
- (b) Willfulness/Negligence - NA
- (c) History of Noncompliance - NA
- (d) Ability to pay - NA
- (e) Other Unique Factors - NA

3. Economic Benefit: Considered but not applied; benefit negligible.

4. Recalculation of Penalty based on New Information: NA

Violation 18 Penalty TOTAL: \$600.00

**Narrative Explanation to Support
Penalty Amount for Proposed Stipulation and Consent Order
Emerald Services Inc.**

NOV # 1210011 SCO # 1307017

Violation Number 19

Description: Failure to maintain accurate records.

1. **Gravity Based Penalty:** \$4,400.00
 - (a) **Potential for Harm - Moderate**
Insufficient documentation precludes the regulatory agency from determining compliance.
 - (b) **Extent of Deviation - Major**
Majority of records were inaccurate or nonexistent.
 - (c) **Multi-Day - NA**
2. **Adjustment Factors:**
 - (a) Good faith - NA
 - (b) Willfulness/Negligence - NA
 - (c) History of Noncompliance - NA
 - (d) Ability to pay - NA
 - (e) Other Unique Factors - NA
3. **Economic Benefit:** Considered but not applied due to difficulty in determining benefit.
4. **Recalculation of Penalty based on New Information:** NA

Violation 19 Penalty TOTAL: \$4,400.00

Emerald Services Inc. - Draft Calculation Work Sheet - SCO 1307017

PROPOSED TOTAL PENALTY			\$73,274.00
Finding 1	Failure to properly label and maintain used oil storage tanks	Multi-Day Event Percent +/-	Finding 1
	Gravity based penalty from matrix		\$600.00
	(a) Potential for harm		MODERATE
	(b) Extent of deviation		MINOR
	Percent increase/decrease for wilfulness/negligence		
	Add gravity based penalty and percent increase for wilfulness/negligence		\$600.00
	Proposed Finding 1 Penalty		\$600.00
Finding 2	Improper storage of used oil outside of permitted area (Tank Farm #1)	Multi-Day Event Percent +/-	Finding 2
	Gravity based penalty from matrix		\$800.00
	(a) Potential for harm		MINOR
	(b) Extent of deviation		MAJOR
	Multi-day matrix penalty amount		\$60.00
	Days of Event (minus 1) multiplied by multi-day penalty amount	179	\$10,740.00
	Gravity base penalty plus multi-day penalty		\$11,540.00
	Percent increase wilfulness/negligence	10%	\$1,154.00
	Gravity based, multi-day and percent increase for wilfulness/negligence		\$12,694.00
Proposed Finding 2 Penalty		\$12,694.00	
Finding 3	Failed to provide written report to the Division for used oil spill over 25 gallons.	Multi-Day Event Percent +/-	Finding 3
	Gravity based penalty from matrix		\$600.00
	(a) Potential for harm		MINOR
	(b) Extent of deviation		MAJOR
	Proposed Finding 3 Penalty		\$600.00

Emerald Services Inc. - Draft Calculation Work Sheet - SCO 1307017

PROPOSED TOTAL PENALTY			\$73,274.00
Finding 4	Failure to store, manage, transport, report, and document oily water used oil when sent for used oil recovery.	Multi-Day Event Percent +/-	Finding 4
	Gravity based penalty from matrix		\$800.00
	(a) Potential for harm		MINOR
	(b) Extent of deviation		MAJOR
	Multi-day penalty from matrix		\$60.00
	Days of Event (minus 1) multiplied by multi-day penalty amount	179	\$10,740.00
	Gravity base penalty plus multi-day penalty		\$11,540.00
Proposed Finding 4 Penalty			\$11,540.00
Finding 5	Delivered used oil to a unpermitted used oil processor for processing.	Multi-Day Event Percent +/-	Finding 5
	Gravity based penalty from matrix		\$1,600.00
	(a) Potential for harm		MODERATE
	(b) Extent of deviation		MINOR
Proposed Finding 5 Penalty			\$1,600.00
Finding 6	Exceeded the two rail car limit for storing used oil at the transfer facility.	Multi-Day Event Percent +/-	Finding 6
	Gravity based penalty from matrix		\$200.00
	(a) Potential for harm		MINOR
	(b) Extent of deviation		MINOR
	Number of events multiplied by gravity based penalty	5 Events	\$1,000.00
Proposed Finding 6 Penalty			\$1,000.00
Finding 7	Failure to increase financial assurance amount after increasing storage capacity at the transfer facility.	Multi-Day Event Percent +/-	Finding 7
	Gravity based penalty from matrix		\$0.00
	Proposed Finding 7 Penalty		

Emerald Services Inc. - Draft Calculation Work Sheet - SCO 1307017

PROPOSED TOTAL PENALTY		\$73,274.00	
Finding 8	Failure to submit Used Oil Annual reports before March 1 of reporting year for each permit.	Multi-Day Event Percent +/-	Finding 8
	Gravity based penalty from matrix		\$100.00
	(a) Potential for harm		MINOR
	(b) Extent of deviation		MINOR
	Number of events multiplied by gravity based penalty	3 Events	\$300.00
Proposed Finding 8 Penalty			\$300.00
Finding 9	Storage of used oil in rail cars exceeding 35 days without having a Processor Permit.	Multi-Day Event Percent +/-	Finding 9
	Gravity based penalty from matrix		\$100.00
	(a) Potential for harm		MINOR
	(b) Extent of deviation		MINOR
	Number of events multiplied by gravity based penalty	8 Events	\$800.00
Proposed Finding 9 Penalty			\$800.00
Finding 10	Failure to have two employees present during unloading of used oil at rail yard.	Multi-Day Event Percent +/-	Finding 10
	Gravity based penalty from matrix		\$0.00
	Proposed Finding 10 Penalty		
Finding 11	Burning untested business oil in the facility's used oil heater.	Multi-Day Event Percent +/-	Finding 11
	Gravity based penalty from matrix		\$1,500.00
	(a) Potential for harm		MODERATE
	(b) Extent of deviation		MINOR
	Proposed Finding 11 Penalty		

Emerald Services Inc. - Draft Calculation Work Sheet - SCO 1307017

PROPOSED TOTAL PENALTY		\$73,274.00
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Finding 12	Failure to analyze used oil by a Utah certified lab before marketing and transporting as on-specification oil.	Multi-Day Event Percent +/-	Finding 12
	Gravity based penalty from matrix		\$2,000.00
	(a) Potential for harm		MODERATE
	(b) Extent of deviation		MODERATE
	Number of events multiplied by gravity based penalty	15 events	\$30,000.00
Proposed Finding 12 Penalty			\$30,000.00

Finding 13	Failure to screen used oil for halogens prior to collection.	Multi-Day Event Percent +/-	Finding 13
	Gravity based penalty from matrix		\$1,200.00
	(a) Potential for harm		MODERATE
	(b) Extent of deviation		MINOR
	Proposed Finding 13 Penalty		

Finding 14	Transported used oil in unpermitted used oil collection vehicles.	Multi-Day Event Percent +/-	Finding 14
	Gravity based penalty from matrix		\$40.00
	(a) Potential for harm		MINOR
	(b) Extent of deviation		MINOR
	Proposed Finding 14 Penalty		

Finding 15	Shipping used oil off-site using a transporter without and EPA ID number.	Multi-Day Event Percent +/-	Finding 15
	Gravity based penalty from matrix		\$0.00
	Proposed Finding 15 Penalty		

Emerald Services Inc. - Draft Calculation Work Sheet - SCO 1307017

PROPOSED TOTAL PENALTY			\$73,274.00
Finding 16	Failure to modify Permits.	Multi-Day Event Percent +/-	Finding 16
	Gravity based penalty from matrix		\$3,200.00
	(a) Potential for harm		MODERATE
	(b) Extent of deviation		MAJOR
	Proposed Finding 16 Penalty		
Finding 17	Failure to train used oil drivers to correctly screen for halogens with Clor-D-Tect Kit.	Multi-Day Event Percent +/-	Finding 17
	Gravity based penalty from matrix		\$3,200.00
	(a) Potential for harm		MODERATE
	(b) Extent of deviation		MAJOR
	Proposed Finding 17 Penalty		
Finding 18	Failure to document the used oil training of three employees.	Multi-Day Event Percent +/-	Finding 18
	Gravity based penalty from matrix		\$200.00
	(a) Potential for harm		MINOR
	(b) Extent of deviation		MINOR
	Number of events multiplied by gravity based penalty	3 Events	\$600.00
Proposed Finding 18 Penalty			\$600.00
Finding 19	Failure to keep required documentation.	Multi-Day Event Percent +/-	Finding 19
	Gravity based penalty from matrix		\$4,400.00
	(a) Potential for harm		MODERATE
	(b) Extent of deviation		MAJOR
	Proposed Finding 19 Penalty		



State of Utah

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Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF SOLID AND
HAZARDOUS WASTE
Scott T. Anderson
Director

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Shane Whitney
Dwayne Woolley
Scott T. Anderson
Executive Secretary

April 25, 2014

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
[7008 0500 0000 8557 0517]

Jim Munnell, General Manager
Emerald Services, Inc.
7343 East Marginal Way South
Seattle, WA 98108

RE: Compliance Evaluation Inspections
Notice of Violation and Compliance Order
UTR000007831 and UTR000008201

Dear Mr. Munnell:

Enclosed is **NOTICE OF VIOLATION AND COMPLIANCE ORDER (NOV/CO)** No. 1307015, based on findings documented by Division of Solid and Hazardous Waste inspectors during compliance inspections conducted between June 25, 2013 and September 24, 2013. Please be advised that compliance with this ORDER is mandatory and will not relieve Emerald of liability for past violations.

If you have any questions, please call Michelle Weis at (801) 536-0256.

Sincerely,

Scott T. Anderson, Director
Division of Solid and Hazardous Waste

STA/MAW/kl

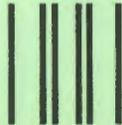
Enclosure: Notice of Violation and Compliance Order

c: Gary Edwards, MS, Health Officer, Salt Lake County Health Dept.
Royal DeLegge, MPA, EHS, Environmental Health Director, Salt Lake County Health Dept.
David Duster, U.S. EPA, Region VIII, ENF-R

DSHW-2013-006544

195 North 1950 West • Salt Lake City, UT
Mailing Address: P.O. Box 144880 • Salt Lake City, UT 84114-4880
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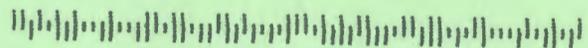


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Permit No. G-10

STATE MAIL 04/30/2014 04:22:12

• Sender: Please print your name, address, and ZIP+4 in this box •

UTAH DEPT. OF ENV. QUALITY
DIV. OF SOLID & HAZARDOUS WASTE
RE: DSHW-2013-006544
PO BOX 144880
SLC UT 84114-4880



SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Jim Munnell, G. Manager
 Emerald Services, Inc.
 7343 E. Marginal Way S.
 Seattle, WA 98108

7008 0500 0000 8557 0517

2. Article Number
(Transfer from service label)

7008 0500 0000 8557 0517

PS Form 3811, August 2001

Domestic Return Receipt

102595-02-M-1540

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

Jacklyn Munnell

Agent
 Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1? Yes
 If YES, enter delivery address below: No



3. Service Type

Certified Mail Express Mail
 Registered Return Receipt for Merchandise
 Insured Mail C.O.D.

4. Restricted Delivery? (Extra Fee) Yes

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In the Matter of:	:	NOTICE OF VIOLATION & COMPLIANCE ORDER
	:	
Emerald Services, Inc.	:	No. 1307015
UTR000007831	:	
UTR000008201	:	

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This **NOTICE OF VIOLATION AND COMPLIANCE ORDER (NOV/CO)** is issued by the Director of the Division of Solid and Hazardous Waste pursuant to the Utah Used Oil Management Act (the Act), Utah Code Ann. § 19-6-701, *et seq.* The Director has authority to issue such NOTICES and ORDERS in accordance with Utah Code Ann. § 705 and 721.

FINDINGS

1. Emerald Services, Inc. (Emerald) is a Utah corporation licensed to do business in the State of Utah. Emerald operates a facility at 2450 South 800 West in Salt Lake City, Utah where it processes, markets and transports used oil (Processing Facility). Emerald also operates a transfer facility at 650 West 500 South in Salt Lake City, Utah for storage and transportation of used oil (Railyard).
2. Emerald is a "person" as defined in Utah Code Ann. § 19-1-103(4) and is subject to all applicable provisions of the Act, R315 of the Utah Administrative Code (Rules) and the following permits:

Permit/Registrations	Date Issued	Location
UOP-0084 (Transporter)	December 18, 2002	2450 South 800 West
UOP-0087 (Transfer Facility)	April 22, 2004	650 West 500 South
UOP-0090 (Processor)	November, 1, 2004	2450 South 800 West
UOR-0077 (Marketer)	March 31, 2004	2450 South 800 West

3. Authorized representatives of the Director conducted compliance evaluation inspections at the Emerald facilities between June 25, 2013 and September 24, 2013.
4. R315-15-2.3 of the Utah Administrative Code requires a Permittee to have storage tanks in good condition, not leaking and properly labeled.
 - 4a. On June 25, 2013, the inspector documented 14 tanks at the Processing Facility with pinhole leaks in the tank walls.
 - 4b. From January 9, 2012 through June 24, 2013, tank inventory logs indicated Tank 18 contained 6,221 gallons of used oil, but could not be pumped due to the condition of the tank system.

- 4c. On June 25, 2013, the inspector documented that Tank 3 at the Processing Facility was labeled as containing used oil. Available tank records document that the tank contained antifreeze, not used oil, from January 9, 2012 through June 25, 2013.
5. In accordance with Processor Permit Condition 10, as modified, the Permittee may only store used oil in Tank Farm #1, which consists of above-ground steel tanks in a concrete-bermed area and containers in the warehouse. In addition, Permit Condition 10, as modified, prohibits the direct transfer of used oil from transporter vehicles to rail cars.
- 5a. On June 25, 2013, the inspector documented that Tanks 1 and 3 contained antifreeze, Tanks 6, 9, 29, and 30 contained oily water and Tank 32 contained Trans-mix (recycled fuel).
- 5b. The Permittee leased three 21,000-gallon tight lined steel baker tanks from Bakercorp and placed them in the parking lot of the Permittee's processing facility. These unpermitted containers were used for used oil storage from November 2012 until June 24, 2013. Emerald's records show deliveries of over 221,000 gallons of used oil to these baker tanks between November 8, 2012 and June 21, 2013.
- 5c. Emerald's transporter bills of lading from November 8, 2012 to June 21, 2013, documented delivery of used oil to Emerald. This used oil was stored in unpermitted tanker trucks.
6. R315-15-9.1(b) and R315-15.9.4 of the Utah Administrative Code require parties responsible for spills of used oil over 25 gallons to notify DEQ within 24 hours of the spill. Within 15 days after the spill, the responsible party is required to submit a written report of the circumstances of the spill and how the spill was remediated.
- 6a. On August 9, 2012, Emerald drivers spilled 75 gallons of used oil from a tote at 650 West 600 North in Springville, Utah. The used oil reached the ground and a nearby storm drain. Emerald did not notify the DEQ of the release.
7. R315-15-1.1(f) of the Utah Administrative Code requires that oily waste water from which used oil is to be recovered shall be managed as used oil.
- 7a. During the inspections, the inspector documented that Emerald stored oily waste water from which used oil was destined to be recovered in containers that were not labeled as used oil in accordance with R315-15-5.5(d)(1) of the Utah Administrative Code. Emerald did not test the halogen content of the oily waste water as required under R315-15-4.5 of the Utah Administrative Code and Marketer Registration. Emerald then transported the oily waste water off site under bills of lading that did not identify it as used oil in accordance with R315-15-4 of the Utah Administrative Code.
8. In accordance with R315-15-4.4 of the Utah Administrative Code, used oil can only be transported to another permitted used oil processor.
- 8a. During the inspections, the inspector documented that Emerald transported used oil to Renegade Oil. Renegade Oil does not have a permit to process used oil.
9. In accordance with Condition 5 of the Transfer Facility Permit, as modified, no more than two rail cars containing used oil may be stored at the Permittee's transfer facility.

- 9a. During the inspection, the inspector documented between August 19, 2011 and June 12, 2013 five occurrences where more than two rail cars containing used oil were stored at the transfer facility.
10. R315-15-12.2(b) of the Utah Administrative Code requires an increase in financial assurance when the Permittee increases capacity to store used oil. The additional financial assurance shall be in place and effective before the additional storage capacity can be utilized.
- 10a. Emerald increased the storage capacity at its transfer facility from one rail car to two rails cars, but failed to increase the financial assurance to account for the increased capacity.
11. R315-15-12.4, R315-15-13.4(d) and R315-15-13.5(d) of the Utah Administrative Code requires the Permittee to submit an accurate annual report to the Division no later than March 1 of the reporting year for the processor, transporter and transfer permits.
- 11a. The annual report for 2010 was submitted 44 days late, the annual report for 2011 was submitted 27 days late and the annual reported submitted in 2012 was submitted 176 days late.
12. R315-15-4.6(a) of the Utah Administrative Code prohibits storage of used oil at transfer facilities longer than 35 days without a permit.
- 12a. During the inspections, between March 14, 2012 and June 1, 2012, the inspector documented eight occurrences of railcars containing used oil that were stored at the Emerald transfer facility for longer than 35 days (42 to 85 days).
13. In accordance with Condition 5 of the Transfer Facility Permit, Emerald is required to have two trained workers present during the transfer of any used oil from tanker trucks to rail cars.
- 13a. During the inspections, the inspector documented that two drivers were not present at the rail yard when unloading used oil trucks five times between February 22, 2013 and March 29, 2013.
14. R315-15-2.4 of the Utah Administrative Code prohibits the burning of untested used oil for energy recovery without a permit.
- 14a. During the inspections, the inspector documented that 1,900 gallons of untested used oil were removed from Tank # 4 and burned in the used oil heater at Emerald's warehouse on January 18, 2013 and February 4, 2013.
15. The sampling and analysis plans in the Processor permit, the Transporter permit, the Transfer Facility permit and the Marketer Registration all prohibit used oil from being shipped off site as on-specification used oil without being sampled and analyzed.
- 15a. Between November 3, 2011 and June 12, 2013, twenty-one railcar shipments of used oil were shipped as on-specification used oil without being properly sampled and analyzed.

16. In accordance with R315-15-4.5 of the Utah Administrative Code, a used oil transporter shall determine whether the total halogen content of used oil being transported or stored is above or below 1,000 ppm.
- 16a. Between January 2012 and June 2013, total halogen content of sixteen loads of used oil was not determined.
17. In accordance with the Transporter Permit, Section 4, the Permittee is only allowed to transport used oil in vehicles listed by vehicle identification number in the Transporter Permit.
- 17a. During the inspections, the inspector documented that the Permittee was using five vehicles for used oil transportation that were not listed in the permit.
18. In accordance with R315-15-5.9 of the Utah Administrative Code, used oil processors who ship used oil off site shall use a used oil transporter who has obtained an EPA identification number.
- 18a. During the inspections, the inspector documented that James J. Williams Bulk Service regularly picked up used oil from Emerald Services Processing facility and transported the oil to Emerald's used oil processing facilities in Tacoma, Washington. This transporter did not have an EPA ID number when it transported this used oil.
19. Emerald's Processor, Transporter, and Transfer Facility Permits require that the Permittee submit a permit modification to the Director for approval if Permit information or facility operations are going to be changed.
- 19a. During the inspections, the inspector documented that the Permittee failed to modify its permits on multiple occasions before it changed permit information and facility operations.
20. In accordance with the Permittee's Transporter, Transfer Facility, and Processor Permits, and R315-15-13.1(c)(5) of the Utah Administrative Code, handlers of used oil shall be trained to perform total halogen (Clor-D-Tect) screening.
- 20a. During the inspections, the inspector requested all facility drivers (bulk and box truck) to test a used oil sample with a Clor-D-Tect kit. None of the facility drivers could successfully perform this test.
21. In accordance with the Transporter Permit, Condition 12, Transfer Facility Permit, Condition 12 and Processor Permit, Condition 11 Permittee's Transporter, Transfer Facility, and Processor Permits, personnel handling used oil must be properly trained. The training must be documented.
- 21a. During the inspection, the inspector documented that the Permittee did not provide documentation of training records for all employees who manage used oil including the onsite facility manager and two used oil truck drivers.
22. Used oil transporters, transfer facilities, and processors are required by R315-15-4.7 and R315-15-5.7 of the Utah Administrative Code to keep a record of information specified in those rules for each shipment of used oil they accept.
- 22a. During the inspection, the inspector documented that facility records were disorganized, missing or inaccurate to the extent, that it was impossible to account fully for the collection,

storing, analytical testing and marketing of the used oil handled by the Permittee during the last three years.

- 22b. During the inspection, the inspector documented that the Permittee did not have records providing the required information for shipments between the processor facility and the transfer facility.
- 22c. During the inspection, the inspector documented that rail car shipment records were missing for bulk rail shipments to Bango Oil (June 26, 2012-PPRX28562).
- 22d. During the inspection, the inspector documented that the Permittee failed to track the movements of any non-bulk used oil containers after collection by the box trucks.
- 22e. During the inspection, the inspector documented that analytical records were incomplete for shipments of used oil by rail or truck.
- 22f. During the inspection, the inspector documented that tank log records were incomplete and missing.
- 22g. During the inspection, the inspector documented that some tanks had multiple inconsistent records for the same batch of used oil transferred in and out of the tanks.
- 22h. During the inspection, the inspector documented that tens of thousands of gallons of collected used oil were unaccounted for in the Permittee's used oil management records.

DETERMINATION OF VIOLATIONS

Based on the foregoing FINDINGS, Emerald has violated provisions of the Rules, the Act, and the Permit applicable to its facility. Specifically, Emerald has violated the following:

- 1. R315-15-2.3 of the Utah Administrative Code by failing to maintain storage tanks in good condition with proper labeling.
- 2. Processor Permit Condition 10 by failing to store used oil properly.
- 3. R315-15-9.1(b) and R315-15.9.4 of the Utah Administrative Code by failing to provide notification and a written report to the Director of a spill of used oil of over 25 gallons.
- 4. R315-15-1.1(f) of the Utah Administrative Code by failing to manage oily wastewater as used oil.
- 5. R315-15-4.4(a) of the Utah Administrative Code by delivering oily water for used oil recovery to an un-permitted used oil processing facility.
- 6. Condition 5 of the Transfer Facility Permit by exceeding the two-railcar limit for used oil storage at its Transfer facility.

7. R315-15-12.2(b) of the Utah Administrative Code by failing to increase the amount or face value of the financial assurance to meet the additional storage capacity at its Transfer Facility.
8. R315-15-12.4, R315-15-13.4(d), and R315-15-13.5(d) of the Utah Administrative Code by failing to submit accurate annual reports by March 1 of the reporting year.
9. R315-15-4.6(a) of the Utah Administrative Code by storing used oil longer than 35 days at its Transfer Facility without meeting processor/re-refiner requirements.
10. Condition 5 of the Transfer Facility Permit by failing to have two trained workers present at the transfer facility when drivers were loading railcars.
11. R315-15-13.6(b) of the Utah Administrative Code by burning untested used oil in the facility's used oil heater located in its warehouse.
12. The Processor permit, the Transporter permit, the Transfer Facility permit and the Marketer Registration by failing to lock down and sample used oil tanks and railcars.
13. R315-15-4.5 of the Utah Administrative Code by failing to document halogen screening of used oil collected by drivers.
14. Section 4 of the Transporter Permit by transporting used oil in vehicles prohibited by the Transporter Permit.
15. R315-15-5.9 of the Utah Administrative Code by failing to ship used oil with a permitted used oil transporter.
16. The Permittee's Transporter, Transfer Facility and Processor Permits by failing to modify the permits when operational changes were implemented.
17. R315-15-13(c)(5) of the Utah Administrative Code by failing to properly train personnel.
18. R315-15-4 and R315-5 of the Utah Administrative Code by failing to maintain accurate used oil records.

ORDER

Based on the foregoing FINDINGS AND VIOLATIONS Emerald is hereby ordered to:

1. Submit to the Director on or before May 12, 2014, written notification of Emerald's intent to comply with this ORDER and indicate how compliance is to be achieved.
2. Submit to the Director on or before May 30, 2014, a written description of the procedures that have been or will be implemented to ensure that the violations documented herein do not recur.

3. Submit to the Director on or before May 30, 2014, documentation showing that used oil storage tanks have been certified by a Utah professional engineer as to their integrity to store used oil.

OPPORTUNITY FOR HEARING

This NOTICE OF VIOLATION AND COMPLIANCE ORDER is effective immediately and shall become final unless Emerald Services LLC administratively contests it. Failure to contest this NOTICE OF VIOLATION AND COMPLIANCE ORDER in the manner and within the time period prescribed by R305-7-303 constitutes a waiver of any right of administrative contest, reconsideration, review, or judicial appeal.

Utah Code Ann. Section 19-6-721 provides that violation of any order, plan, rule, or other requirement issued or adopted under Title 19, Ch. 6, Pt. 7 may be subject to a civil penalty of up to \$10,000 per day for each day of violation.

Dated this 25th day of April, 2014

By: 

Scott T. Anderson, Director
Division of Solid and Hazardous Waste

CERTIFICATE OF MAILING

I HEREBY CERTIFY that I mailed a true and correct copy of the foregoing **NOTICE OF VIOLATION AND COMPLIANCE ORDER** on **April 25, 2014** by **US Certified Mail, Return Receipt Requested [7008 0500 0000 8557 0517]** to:

Jim Munnell, General Manager
Emerald Services, Inc.
7343 East Marginal Way South
Seattle, WA 98108



Arlene Lovato, DSHW

WASTE MANAGEMENT AND RADIATION CONTROL BOARD

Executive Summary

Clean Harbors Grassy Mountain

November 12, 2015

What is the issue before the Board?	<p>Clean Harbors Grassy Mountain, LLC has requested a site-specific treatment variance from the Utah Hazardous Waste Management Rules. The Grassy Mountain Facility seeks authorization to stabilize a High Mercury – Subcategory Inorganic waste stream that has the characteristic waste code D009. The treated waste will then be disposed in a hazardous waste cell at the facility.</p>
What is the historical background or context for this issue?	<p>The Grassy Mountain Facility proposes to stabilize and dispose of a mercury waste stream that is generated at the Clean Harbors Aragonite Facility and carries the waste code for High Mercury-Inorganic Subcategory along with many other waste codes. The waste stream, profile number GM91-2668-HIHG, is generated by the spray dryer at the Aragonite Facility.</p> <p>The technology-based treatment code for this material is RMERC (roasting/retorting followed by mercury recovery). The RMERC process generates a secondary waste stream. Secondary waste streams, when greater than, or equal to, 260 mg/kg total mercury, are required to be further stabilized to a level of 0.20 mg/l using the toxicity characteristic leaching procedure (TCLP). Secondary waste streams, when less than 260 mg/kg total mercury, are required to be treated to 0.025 mg/l TCLP. The Grassy Mountain Facility proposes to treat all of the waste, regardless of the initial concentration of mercury, to the more restrictive standard of 0.025 mg/L, or less, based on the TCLP.</p> <p>The Grassy Mountain Facility is proposing to treat the waste directly with a stabilization method rather than going through the initial retorting or roasting of the waste. The hardship for Clean Harbors is that there currently is no alternative way for the company to dispose of this waste. Facilities that can retort the waste stream are not permitted to treat waste that have waste codes not associated with mercury and this particular waste stream has numerous codes in addition to the code for mercury.</p> <p>The Grassy Mountain Facility has conducted a treatability study on the waste stream. The treatment formula developed for this waste stream resulted in mercury concentrations below the requested concentration of 0.025 mg/L TCLP. In addition, LDR compliance will be met with all other waste codes associated with the waste prior to disposal.</p> <p>Clean Harbors Grassy Mountain has requested, and the Board has approved, identical and similar site-specific treatment variances in March 2009, November 2010, June 2013 and February 2015.</p>

	<p>A notice for public comment was published in the October 1, 2015 issues of <i>The Salt Lake Tribune</i>, <i>The Deseret News</i> and <i>The Tooele Transcript Bulletin</i>. The comment period began on October 1, 2015 and concluded on October 30, 2015. No comments were received.</p> <p>This variance, if granted, will be valid until November 12, 2016.</p>
What is the governing statutory or regulatory citation?	<p>Variances are provided for in 19-6-111 of the Utah Solid and Hazardous Waste Act and R315-2-13 of the Utah Administrative Code. This is a site-specific variance from an applicable treatment standard as allowed by R315-13-1 (40 CFR 268.44(h) (2) by reference).</p>
Is Board action required?	<p>Yes, Board action on the variance request is required.</p>
What is the Division Director's recommendation?	<p>The Director recommends that the Board approve the site-specific treatment variance.</p>
Where can more information be obtained?	<p>For technical questions, please call Ed Costomiris (801) 536-0219. For legal questions, please call Raymond Wixom at (801) 536-0290.</p> <p>A copy of the Request Site-Specific Treatment Variance for High Mercury – Inorganic Subcategory is enclosed in the Board Packet.</p>



Div of Waste Management
and Radiation Control

SEP 16 2015

DSHW-2015-009796

Clean Harbors Grassy Mountain, LLC.
P.O. Box 22750
Salt Lake City, UT 84122
Tel: 435.884.8900
Fax: 435.884.8990
www.cleanharbors.com

September 15, 2015

Mr. Scott T. Anderson
Director
Division of Waste Management and
Radiation Control
195 North 1950 West
Salt Lake City, UT 84116

RE: Request for Site-Specific Treatment Variance from Technology-Based Requirements for D009 (High Mercury-Inorganic Subcategory) for Clean Harbors Aragonite Spray Dryer Incinerator Residue Waste Clean Harbors Grassy Mountain, LLC., EPA ID No. UTD991301748 ✓

Dear Mr. Anderson:

In accordance with Utah Administrative Code R315-2-13, Clean Harbors Grassy Mountain, LLC. (CHGM) is requesting a Site-Specific Treatment Variance seeking authorization to stabilize one waste stream carrying the waste code D009 (High Mercury-Inorganic Subcategory). The waste, spray dryer solids, identified in this request is characterized by Waste Material Profile Sheet GM91-2668HIHGB, Spray Dryer Solids. The treatment technology code for this subcategory is RMERC. The RMERC technology is described as: *Retorting or roasting in a thermal processing unit capable of volatilizing mercury and condensing the volatilized mercury for recovery.* The RMERC process generates secondary waste streams that require further stabilization.

This request is submitted in accordance with R315-13-1 (40 CFR 268.44 incorporated by reference), which may allow a site-specific variance from an applicable treatment standard provided that the following condition is met:

40 CFR 268.44(h)(2) It is inappropriate to require the waste to be treated to the level specified in the treatment standard or by the method specified as the treatment standard, even though such treatment is technically possible.

"People and Technology Creating a Better Environment"

This request is submitted in accordance with the requirements of 40 CFR 260.20(b).

40 CFR 260.20(b)(1): This petition is being submitted by

Clean Harbors Grassy Mountain, LLC.
3 Miles East, 7 Miles North of Knolls
Exit 41, Off I-80
Knolls, Utah 84029

40 CFR 260.20(b)(2): CHGM requests approval of a variance from the 40CFR 268.40-Treatment Standards for Hazardous Wastes and 40CFR 268.42-Treatment Standards Expressed as Specific Technologies for the EPA waste code D009 (High Mercury-Inorganic Subcategory). CHGM proposes to treat, using stabilization technologies, High-Mercury Subcategory residue wastes from the Clean Harbors Aragonite, LLC incinerator. All actions will be performed in accordance with the Clean Harbors Grassy Mountain State-issued Part B Permit.

40 CFR 260.20(b)(3): CHGM is proposing to dispose of treated High Mercury Subcategory hazardous waste that has been treated below a mercury concentration of 0.025mg/l using the Toxicity Characteristic Leaching Procedure (TCLP). Stabilization is the standard treatment method for waste containing D009 (Low Mercury Subcategory) and CHGM is permitted to perform stabilization processes. CHGM conducted a stabilization treatability studies on this waste stream and determined that this waste can be successfully treated to the applicable treatment standard of 0.025 mg/l TCLP specified for D009 (Low Mercury Subcategory) in 40CFR, Part 268.40. Prior to final disposal of the waste in the landfill, CHGM will confirm that the treatment process is successful in meeting the land disposal restriction treatment standards.

40 CFR 260.20(b)(4): The D009 High Mercury-Inorganic Subcategory is described in the 40 CFR 268.40 “Treatment Standards for Hazardous Wastes” table. The description is as follows:

“Nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the toxicity characteristic leaching procedure (TCLP) in SW846; and contain greater than or equal to 260 mg/kg total mercury that are inorganic, including incinerator residues and residues from RMERC. (High Mercury-Inorganic Subcategory).”

The listed treatment technology in 40CFR 268.40 for D009 High Mercury-Inorganic Subcategory waste is RMERC.

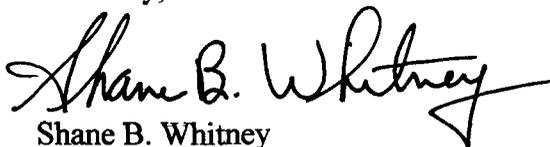
The need and justification for this action is as follows:

- The intent of the RMERC treatment process is to retort or roast materials in a thermal processing unit in order to recover elemental mercury for recycling. However, the waste stream carries several EPA codes which the mercury retorter is not permitted to accept and does not meet their variance under the Boiler and Industrial Furnace (BIF) exemption. Attached with this variance request are correspondence, dated April 22, 2013, from Mercury Waste Solutions, LLC (MWS) documenting the unacceptability of incinerator residue wastes for retort.
- Included with this submittal are analytical data for the untreated waste identifying the hazardous contaminants that require treatment to comply with the Land Disposal Restriction Standards. CHGM performed a treatability demonstration study to determine its ability to successfully treat the waste. Laboratory reports for the post-treatment waste analysis demonstrating CHGM ability to treat this waste stream have been included with this submittal.

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

If you have any questions, please call me or Les Ashwood at (435) 884-8900.

Sincerely,



Shane B. Whitney
General Manager
Grassy Mountain Facility

cc: Ed Costomiris, UDEQ/DWMRC
Jeff Coombs, EHS, Environmental Health Director, Tooele County Health Department
Bryan Slade, Environmental Health Director, Tooele County Health Department
Grassy Mountain File



WASTE MATERIAL PROFILE SHEET

Clean Harbors Profile No. GM91-2668HIHGB

A. GENERAL INFORMATION

GENERATOR EPA ID #REGISTRATION # **UTD981552177** GENERATOR NAME: **Clean Harbors Aragonite LLC**
 GENERATOR CODE (Assigned by Clean Harbors) **AG** CITY **Grantsville** STATE/PROVINCE **UT** ZIP/POSTAL CODE **84029**
 ADDRESS **11600 North Aptus Road** PHONE:
 CUSTOMER CODE (Assigned by Clean Harbors) **AG** CUSTOMER NAME: **Clean Harbors Aragonite LLC**
 ADDRESS **11600 North Aptus Road** CITY **Grantsville** STATE/PROVINCE **UT** ZIP/POSTAL CODE **84029**

B. WASTE DESCRIPTION

WASTE DESCRIPTION: **48287 SPRAY DRYER SOLIDS - HIGH MERCURY**

PROCESS GENERATING WASTE: **INCINERATION OF HAZARDOUS WASTE**

IS THIS WASTE CONTAINED IN SMALL PACKAGING CONTAINED WITHIN A LARGER SHIPPING CONTAINER? **No**

C. PHYSICAL PROPERTIES (at 25C or 77F)

PHYSICAL STATE <input checked="" type="checkbox"/> SOLID WITHOUT FREE LIQUID POWDER MONOLITHIC SOLID LIQUID WITH NO SOLIDS LIQUID/SOLID MIXTURE % FREE LIQUID % SETTLED SOLID % TOTAL SUSPENDED SOLID SLUDGE GAS/AEROSOL	NUMBER OF PHASES/LAYERS 1 2 3 TOP 0.00 % BY VOLUME (Approx.) MIDDLE 0.00 BOTTOM 0.00				VISCOSITY (If liquid present) 1 - 100 (e.g. Water) 101 - 500 (e.g. Motor Oil) 501 - 10,000 (e.g. Molasses) > 10,000		COLOR varies
	ODOR <input checked="" type="checkbox"/> NONE MILD STRONG Describe:		BOILING POINT °F (°C) <= 95 (<=35) 95 - 100 (35-38) 101 - 129 (38-54) >= 130 (>54)		MELTING POINT °F (°C) < 140 (<60) 140-200 (60-93) <input checked="" type="checkbox"/> > 200 (>93)		
FLASH POINT °F (°C) < 73 (<23) 73 - 100 (23-38) 101 - 140 (38-60) 141 - 200 (60-93) > 200 (>93)	pH <= 2 2.1 - 6.9 <input checked="" type="checkbox"/> 7 (Neutral) 7.1 - 12.4 >= 12.5	SPECIFIC GRAVITY < 0.8 (e.g. Gasoline) 0.8-1.0 (e.g. Ethanol) 1.0 (e.g. Water) 1.0-1.2 (e.g. Antifreeze) <input checked="" type="checkbox"/> > 1.2 (e.g. Methylene Chloride)	ASH < 0.1 0.1 - 1.0 <input checked="" type="checkbox"/> Unknown 1.1 - 5.0 5.1 - 20.0		BTU/LB (MJ/kg) <input checked="" type="checkbox"/> < 2,000 (<4.6) 2,000-5,000 (4.6-11.6) 5,000-10,000 (11.6-23.2) > 10,000 (>23.2) Actual:		

D. COMPOSITION (List the complete composition of the waste, include any inert components and/or debris. Ranges for individual components are acceptable. If a trade name is used, please supply an MSDS. Please do not use abbreviations.)

CHEMICAL	MIN	MAX	UOM
ANTIMONY COMPOUNDS	0.0000000	1.0000000	%
ARSENIC COMPOUNDS	0.0000000	1.0000000	%
ARSENIC COMPOUNDS (1.0)	0.0000000	1.0000000	%
ASH	100.0000000	100.0000000	%
BARIUM COMPOUNDS	0.0000000	1.0000000	%
BENZENE	-	-	Trace
BERYLLIUM COMPOUNDS	0.0000000	1.0000000	%
CADMIUM COMPOUNDS	0.0000000	1.0000000	%
CHROMIUM COMPOUNDS	0.0000000	1.0000000	%
LEAD COMPOUNDS	0.0000000	1.0000000	%

DOES THIS WASTE CONTAIN ANY HEAVY GAUGE METAL DEBRIS OR OTHER LARGE OBJECTS (EX., METAL PLATE OR PIPING >1/4" THICK OR >12" LONG, METAL REINFORCED HOSE >12" LONG, METAL WIRE >12" LONG, METAL VALVES, PIPE FITTINGS, CONCRETE REINFORCING BAR OR PIECES OF CONCRETE >3")? YES NO

If yes, describe, including dimensions:

DOES THIS WASTE CONTAIN ANY METALS IN POWDERED OR OTHER FINELY DIVIDED FORM? YES NO

DOES THIS WASTE CONTAIN OR HAS IT CONTACTED ANY OF THE FOLLOWING: ANIMAL WASTES, HUMAN BLOOD, BLOOD PRODUCTS, BODY FLUIDS, MICROBIOLOGICAL WASTE, PATHOLOGICAL WASTE, HUMAN OR ANIMAL DERIVED SERUMS OR PROTEINS OR ANY OTHER POTENTIALLY INFECTIOUS MATERIAL? YES NO

I acknowledge that this waste material is neither infectious nor does it contain any organism known to be a threat to human health. This certification is based on my knowledge of the material. Select the answer below that applies:

The waste was never exposed to potentially infectious material. YES NO

Chemical disinfection or some other form of sterilization has been applied to the waste. YES NO

I ACKNOWLEDGE THAT THIS PROFILE MEETS THE CLEAN HARBORS BATTERY PACKAGING REQUIREMENTS. YES NO

I ACKNOWLEDGE THAT MY FRIABLE ASBESTOS WASTE IS DOUBLE BAGGED AND WETTED. YES NO

SPECIFY THE SOURCE CODE ASSOCIATED WITH THE WASTE. **G09** SPECIFY THE FORM CODE ASSOCIATED WITH THE WASTE. **W304**



F. REGULATORY STATUS

YES NO USEPA HAZARDOUS WASTE?
D004 D005 D006 D007 D008 D009 D010 D011 F001 F002 F003 F004 F005 F006 F007 F008 F009 F010 F011 F012 F019

YES NO DO ANY STATE WASTE CODES APPLY?
 Texas Waste Code _____

YES NO DO ANY CANADIAN PROVINCIAL WASTE CODES APPLY?

YES NO IS THIS WASTE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT PER 40 CFR PART 268?
 LDR CATEGORY: **Partially meets LDR standards**
 VARIANCE INFO: _____

YES NO IS THIS A UNIVERSAL WASTE?

YES NO IS THE GENERATOR OF THE WASTE CLASSIFIED AS CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR (CESQG)?

YES NO IS THIS MATERIAL GOING TO BE MANAGED AS A RCRA EXEMPT COMMERCIAL PRODUCT, WHICH IS FUEL (40 CFR 261.2 (C)(2)(II))?

YES NO DOES TREATMENT OF THIS WASTE GENERATE A F006 OR F019 SLUDGE?

YES NO IS THIS WASTE STREAM SUBJECT TO THE INORGANIC METAL BEARING WASTE PROHIBITION FOUND AT 40 CFR 268.3(C)?

YES NO DOES THIS WASTE CONTAIN VOC'S IN CONCENTRATIONS >=500 PPM?

YES NO DOES THE WASTE CONTAIN GREATER THAN 20% OF ORGANIC CONSTITUENTS WITH A VAPOR PRESSURE >= .3KPA (.044 PSIA)?

YES NO DOES THIS WASTE CONTAIN AN ORGANIC CONSTITUENT WHICH IN ITS PURE FORM HAS A VAPOR PRESSURE > 77 KPA (11.2 PSIA)?

YES NO IS THIS CERCLA REGULATED (SUPERFUND) WASTE ?

YES NO IS THE WASTE SUBJECT TO ONE OF THE FOLLOWING NESHAP RULES?
 Hazardous Organic NESHAP (HON) rule (subpart G) Pharmaceuticals production (subpart GGG)

YES NO IF THIS IS A US EPA HAZARDOUS WASTE, DOES THIS WASTE STREAM CONTAIN BENZENE?
 YES NO Does the waste stream come from a facility with one of the SIC codes listed under benzene NESHAP or is this waste regulated under the benzene NESHAP rules because the original source of the waste is from a chemical manufacturing, coke by-product recovery, or petroleum refinery process?
 YES NO Is the generating source of this waste stream a facility with Total Annual Benzene (TAB) >10 Mg/year?
 What is the TAB quantity for your facility? **10.000000** Megagram/year (1 Mg = 2,200 lbs)
 The basis for this determination is: Knowledge of the Waste Or Test Data Knowledge Testing
 Describe the knowledge : **tsdf**

G. DOT/TDG INFORMATION

DOT/TDG PROPER SHIPPING NAME:
NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (SPRYDRYER), 9, PG III

H. TRANSPORTATION REQUIREMENTS

ESTIMATED SHIPMENT FREQUENCY ONE TIME WEEKLY MONTHLY QUARTERLY YEARLY OTHER Other

<p>CONTAINERIZED</p> <p><u>0-0</u> CONTAINERS/SHIPMENT</p> <p>STORAGE CAPACITY: CONTAINER TYPE:</p> <p>CUBIC YARD BOX PALLET</p> <p>TOTE TANK DRUM</p> <p>OTHER: DRUM SIZE:</p>	<p>BULK LIQUID</p> <p>GALLONS/SHIPMENT: 0 Min - 0 Max</p>	<p><input checked="" type="checkbox"/> BULK SOLID</p> <p>SHIPMENT UOM: <input checked="" type="checkbox"/> TON YARD</p> <p>TONS/YARDS/SHIPMENT: 1.00 Min - 50.00 Max</p>
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I. SPECIAL REQUEST

COMMENTS OR REQUESTS:

GENERATOR'S CERTIFICATION

I certify that I am authorized to execute this document as an authorized agent. I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge. I also certify that any samples submitted are representative of the actual waste. If Clean Harbors discovers a discrepancy during the approval process, Generator grants Clean Harbors the authority to amend the profile, as Clean Harbors deems necessary, to reflect the discrepancy.

AUTHORIZED SIGNATURE

NAME (PRINT)

TITLE

DATE

L. Pearson

OB

8/5/15



Addendum

D. COMPOSITION

CHEMICAL	MIN	MAX	UOM
MERCURY	260.000 0000	436.00 00000	PPM
MERCURY COMPOUNDS	0.00000 00	500.00 00000	PPM
NICKEL SULFATE HEXAHYDRATE	0.00000 00	1.0000 000	%
SILVER COMPOUNDS	0.00000 00	1.0000 000	%
THALLIUM COMPOUNDS	0.00000 00	1.0000 000	%
VANADIUM PENTOXIDE	0.00000 00	1.0000 000	%
ZINC COMPOUNDS	0.00000 00	1.0000 000	%
ZINC SELENIDE	0.00000 00	1.0000 000	%

F. REGULATORY STATUS

USEPA HAZARDOUS WASTE?

F024 F025 F032 F034 F035 F037 F038 F039 K001 K009 K010 K011 K013 K014 K015 K016 K017 K018 K019 K020 K021 K022 K023 K024 K025 K026 K027 K029 K030 K031 K032 K033 K034 K035 K036 K037 K038 K039 K040 K041 K042 K046 K048 K049 K050 K051 K052 K060 K061 K062 K069 K071 K073 K083 K084 K085 K086 K087 K093 K094 K095 K096 K097 K098 K100 K101 K102 K103 K104 K105 K107 K108 K109 K110 K111 K112 K113 K114 K115 K116 K117 K118 K123 K124 K125 K126 K136 K156 K169 K170 K171 K172 P001 P002 P003 P004 P005 P006 P007 P008 P009 P010 P011 P012 P013 P014 P015 P016 P017 P018 P020 P021 P022 P023 P024 P026 P027 P028 P029 P030 P031 P033 P034 P036 P037 P038 P039 P040 P041 P042 P043 P044 P045 P046 P047 P048 P049 P050 P051 P054 P056 P057 P058 P059 P060 P062 P063 P064 P066 P067 P068 P069 P070 P071 P072 P073 P074 P075 P077 P082 P084 P085 P087 P088 P089 P092 P093 P094 P095 P096 P097 P098 P099 P101 P102 P103 P104 P105 P106 P108 P109 P110 P111 P113 P114 P115 P116 P118 P119 P120 P121 P122 P123 P185 P188 P189 P191 P192 P197 U001 U002 U003 U004 U005 U006 U007 U008 U009 U010 U011 U012 U014 U015 U016 U017 U018 U019 U020 U021 U022 U024 U025 U026 U027 U028 U029 U030 U031 U032 U034 U035 U036 U037 U038 U039 U041 U042 U043 U044 U045 U046 U047 U048 U049 U050 U051 U052 U053 U055 U056 U057 U058 U059 U060 U061 U062 U063 U064 U066 U067 U068 U069 U070 U071 U072 U073 U074 U075 U076 U077 U078 U079 U080 U081 U082 U083 U084 U085 U086 U087 U088 U089 U090 U091 U092 U093 U094 U095 U097 U098 U099 U101 U102 U103 U105 U106 U107 U108 U109 U110 U111 U112 U113 U114 U115 U116 U117 U118 U119 U120 U121 U122 U123 U124 U125 U126 U127 U128 U129 U130 U131 U132 U134 U135 U136 U137 U138 U140 U141 U142 U143 U144 U145 U146 U147 U148 U149 U150 U152 U153 U154 U155 U156 U157 U158 U159 U161 U162 U163 U164 U165 U166 U167 U168 U169 U170 U171 U172 U173 U174 U176 U177 U178 U179 U180 U181 U182 U183 U184 U185 U186 U187 U188 U190 U191 U192 U193 U194 U196 U197 U200 U201 U203 U204 U205 U206 U207 U208 U209 U210 U211 U213 U214 U215 U216 U217 U218 U219 U220 U221 U222 U223 U225 U226 U227 U228 U235 U236 U237 U238 U239 U240 U243 U244 U246 U247 U248 U249 U328 U353 U359 U364 U367 U394 U395 U404

G. DOT/TDG INFORMATION

WM Mercury Waste, Inc.

21211 Durand Avenue
Union Grove, Wisconsin 53182-9711
800.741.3343 or 262.878.2599
262.878.2699 Fax



April 22, 2013

Mr. Scott Sullivan,
Clean Harbors, Inc.
42 Longwater Drive
Norwell, MA 02061

Dear Mr. Sullivan,

Based upon our previous discussions, WM Mercury Waste, Inc. is not able to accept for retort the incineration residues with high mercury concentrations from your Aragonite Facility. Based upon the information you have provided regarding the characterization of the waste, we are not permitted to receive the material at our facility. In addition the waste does not meet the criteria for waste materials we are able to accept for retort in 40 CFR 266.100(d).

If you have any questions regarding our acceptance criteria, please feel free to call at anytime at 262-878-2599.

Sincerely,

A handwritten signature in black ink, appearing to read 'Pat Baskfield'.

Patrick Baskfield
Sr. Manager Operations
WM Mercury Waste, Inc.

CC: Clean Harbors File

Untreated Waste Analysis: ID SDAG-2

HSWA Analytical Review

Matrix Spray Dryer Solids

BOX ID SDAG-2

IN SERVICE DATE

From: 11/8/2014
To: 11/10/2014

YES NO

Dioxin Campaign:

K061 Campaign:

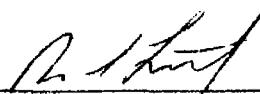
FAILED TREATMENT STANDARDS

TCLP Metals
Daily Composite

Analyte	Waste Codes	Treatment Standard (mg/L)	Result	Units
Cd	D006 F006-009 F011-12 F039 K028 K069 K100 UTS	0.11	7.36	mg/L
Hg	D009	0.2	9.61	mg/L
Hg	F039 K071 K106 P092 UTS	0.025	9.61	mg/L
Ag	D011 F006-009 F011-12 F039 P099 P104 UTS	0.14	0.538	mg/L
Zn	K061 UTS	4.3	39.5	mg/L

ROLLOFF BOX
TOTAL MERCURY: 401mg/Kg

Reviewed by: _____



Untreated Waste Analysis: ID SDAG-2

<i>LIMS Number</i>	1412002	<i>Sample Fraction</i>	04	<i>Sample Fraction ID</i>	SDAG-2	
<i>Sample Date</i>	12/1/2014	Hg		<i>Report</i>	SDAG-2	
		<i>Result</i>	<i>Units</i>	<i>Limit</i>	<i>Analyst</i>	<i>Date of Analysis</i>

Metals

Mercury 7471A	401	mg/Kg	0.055	cre	12/1/2014
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Post-treatment Waste Analysis: ID SDAG-2



Clean Harbors, Inc. Laboratory Test Report

Report ID
201503241229
Tuesday, March 24, 2015

All results are reported on a wet-weight basis unless otherwise noted.

Client ID SDAG21

Lab Sample ID KE1576110

SDG 1796

Test *Metals NWW UTS (liquids)

Analytical Method: EPA 6010C

Prep Method: EPA 3005A

TCLP Batch ID: NA

Prep Batch ID: E0916-15

Data Entered By: ShayJ

Sampling Date: 3/12/2015

Cleanup Batch ID:

Peer Reviewed By: WaiteD

Analysis Date: 3/20/2015

Analysis Batch ID: 150320 OES GMT 1796

Parameter	CAS Nbr	DF	Result	Flag	LOQ	LOD	Test Units	Project Limits
Antimony	7440-36-0	1.0	ND		0.200	0.100	mg/L	1.15 mg/L TCLP
Arsenic	7440-38-2	1.0	ND		0.300	0.300	mg/L	5.0 mg/L TCLP
Barium	7440-39-3	1.0	0.286		0.100	0.010	mg/L	21 mg/L TCLP
Beryllium	7440-41-7	1.0	ND		0.200	0.200	mg/L	1.22 mg/L TCLP
Cadmium	7440-43-9	1.0	ND		0.100	0.030	mg/L	0.11 mg/L TCLP
Chromium	7440-47-3	1.0	ND		0.100	0.050	mg/L	0.60 mg/L TCLP
Lead	7439-92-1	1.0	ND		0.100	0.100	mg/L	0.75 mg/L TCLP
Nickel	7440-02-0	1.0	ND		0.100	0.100	mg/L	11 mg/L TCLP
Selenium	7782-49-2	1.0	ND		0.500	0.250	mg/L	5.7 mg/L TCLP
Silver	7440-22-4	1.0	ND		0.100	0.100	mg/L	0.14 mg/L TCLP
Thallium	7740-28-0	1.0	ND		0.200	0.100	mg/L	0.20 mg/L TCLP
Vanadium	7440-62-2	1.0	ND		0.100	0.100	mg/L	1.6 mg/L TCLP
Zinc	7440-66-6	1.0	ND		1.100	0.550	mg/L	4.3 mg/L TCLP

QC Issues

3005

There were low matrix spike recoveries for barium (38%), lead (63%), nickel (70%), selenium (10%) and thallium (64%). The LCS results were within acceptance limits. All MS/MSD RPDs were within acceptance limits except for selenium. This indicates that the analytical process was in control and that the low matrix spike results were a product of matrix interference. None of the samples had barium or selenium concentrations within 80% to 100% of the UTS limit.

Batch QC Smp: KE1576110

Projects differ from one another in their requirements. The client must ensure that all analytes needed are present and that the reporting limits are appropriate for the data's use. Project Limits are provided as a best-faith effort courtesy. The Client is solely responsible for ensuring that these limits are correct for their project.

** END OF TEST GROUP **

Lab Manager
Richard Roylance
(308) 235-8222

2247 South Highway 71 *

Kimball Laboratory
Kimball * NE 69145 US

Post-treatment Waste Analysis: ID SDAG-2



Clean Harbors, Inc. Laboratory Test Report

Report ID
201503241229
Tuesday, March 24, 2015

All results are reported on a wet-weight basis unless otherwise noted.

Client ID SDAG2-1

Lab Sample ID KE1576110

SDG 1796

Test *Mercury NWW UTS (liquids)

Analytical Method: EPA 7470A

Prep Method: EPA 7470A

TCLP Batch ID: E0907-150317

Prep Batch ID: E0897-90

Data Entered By: Shayj

Sampling Date: 3/12/2015

Cleanup Batch ID:

Peer Reviewed By: WaiteD

Analysis Date: 3/19/2015

Analysis Batch ID: 150319 Hg AGMT1796

Parameter	CAS Nbr	DF	Result	Flag	LOQ	LOD	Test Units	Project Limits
Mercury	7439-97-6	5.0	ND		10.000	10.000	ug/L	0.025 mg/L TCLP

QC Issues

7470

There was a low matrix spike recovery for mercury (73%). The mercury LCS recovery (102%) and the MS/MSD RPD (0%) were within acceptance limits. This indicates that the analytical process was in control and that the low matrix spike recovery was a product of matrix interference. Batch QC Smp: KE1576110

Projects differ from one another in their requirements. The client must ensure that all analytes needed are present and that the reporting limits are appropriate for the data's use. Project Limits are provided as a best-faith effort courtesy. The Client is solely responsible for ensuring that these limits are correct for their project.

**** END OF TEST GROUP ****

Lab Manager
Richard Roylance
(308) 235-8222

2247 South Highway 71 *

Kimball Laboratory
Kimball * NE 69145 US

Untreated Waste Analysis: ID 25768

HSWA Analytical Review

Matrix Spray Dryer Solids

BOX ID 25768

IN SERVICE DATE

From: 11/13/2014
To: 11/15/2014

YES NO

Dioxin Campaign:

K061 Campaign:

FAILED TREATMENT STANDARDS

**TCLP Metals
Daily Composite**

Analyte	Waste Codes	Treatment Standard (mg/L)	Result	Units
Cd	D006 F006-009 F011-12 F039 K028 K069 K100 UTS	0.11	2.8	mg/L
Pb	F006-009 F011-012 F039 K001 K048 K062 K069 K088-087 K100 P110 U051 U144-148 UTS	0.75	1.86	mg/L
Hg	D009	0.2	84.5	mg/L
Hg	F039 K071 K106 P092 UTS	0.025	84.5	mg/L
Ag	D011 F006-009 F011-12 F039 P099 P104 UTS	0.14	0.329	mg/L
Zn	K061 UTS	4.3	54.7	mg/L

ROLLOFF BOX

TOTAL MERCURY 279mg/Kg

Reviewed by:  _____

Untreated Waste Analysis: ID 25768

<i>LIMS Number</i>	1412172	<i>Sample Fraction</i>	14	<i>Sample Fraction ID</i>		
<i>Sample Date</i>	12/13/2014	Hg		<i>Report</i>	25768	
Spray Dryer		<i>Result</i>	<i>Units</i>	<i>Limit</i>	<i>Analyst</i>	<i>Date of Analysis</i>

Metals

Mercury 7471A	-----	279	mg/Kg	0.055	gt	12/15/2014
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Post-treatment Waste Analysis: ID 25768



Clean Harbors, Inc. Laboratory Test Report

Report ID
20150326744
Thursday, March 26, 2015

All results are reported on a wet-weight basis unless otherwise noted.

Client ID 25768-1

Lab Sample ID KE1576113

SDG 1796

Test *Metals NWW UTS (liquids)
Analytical Method: EPA 6010C
Prep Method: EPA 3005A

TCLP Batch ID: NA
Prep Batch ID: E0916-15

Data Entered By: Shayj
Peer Reviewed By: WaiteD

Sampling Date: 3/12/2015
Analysis Date: 3/20/2015

Cleanup Batch ID:
Analysis Batch ID: 150320 OES GMT 1796

Parameter	CAS Nbr	DF	Result	Flag	LOQ	LOD	Test Units	Project Limits
Antimony	7440-36-0	1.0	ND		0.200	0.100	mg/L	1.15 mg/L TCLP
Arsenic	7440-38-2	1.0	ND		0.300	0.300	mg/L	5.0 mg/L TCLP
Barium	7440-39-3	1.0	0.197		0.100	0.010	mg/L	21 mg/L TCLP
Beryllium	7440-41-7	1.0	ND		0.200	0.200	mg/L	1.22 mg/L TCLP
Cadmium	7440-43-9	1.0	ND		0.100	0.030	mg/L	0.11 mg/L TCLP
Chromium	7440-47-3	1.0	ND		0.100	0.050	mg/L	0.60 mg/L TCLP
Lead	7439-92-1	1.0	ND		0.100	0.100	mg/L	0.75 mg/L TCLP
Nickel	7440-02-0	1.0	ND		0.100	0.100	mg/L	11 mg/L TCLP
Selenium	7782-49-2	1.0	ND		0.500	0.250	mg/L	5.7 mg/L TCLP
Silver	7440-22-4	1.0	ND		0.100	0.100	mg/L	0.14 mg/L TCLP
Thallium	7740-28-0	1.0	ND		0.200	0.100	mg/L	0.20 mg/L TCLP
Vanadium	7440-62-2	1.0	ND		0.100	0.100	mg/L	1.6 mg/L TCLP
Zinc	7440-66-6	1.0	ND		1.100	0.550	mg/L	4.3 mg/L TCLP

QC Issues

3005

There were low matrix spike recoveries for barium (38%), lead (63%), nickel (70%), selenium (10%) and thallium (64%). The LCS results were within acceptance limits. All MS/MSD RPDs were within acceptance limits except for selenium. This indicates that the analytical process was in control and that the low matrix spike results were a product of matrix interference. None of the samples had barium or selenium concentrations within 80% to 100% of the UTS limit.

Batch QC Smp: KE1576110

Projects differ from one another in their requirements. The client must ensure that all analytes needed are present and that the reporting limits are appropriate for the data's use. Project Limits are provided as a best-faith effort courtesy. The Client is solely responsible for ensuring that these limits are correct for their project.

** END OF TEST GROUP **

Lab Manager
Richard Roynance
(308) 235-8222

2247 South Highway 71 *

Kimball Laboratory
Kimball * NE 69145 US

Post-treatment Waste Analysis: ID 25768



Clean Harbors, Inc. Laboratory Test Report

Report ID
20150326744
Thursday, March 26, 2015

All results are reported on a wet-weight basis unless otherwise noted.

Client ID 25768-1

Lab Sample ID KE1576113

SDG 1796

Test *Mercury NWW UTS (liquids)

Analytical Method: EPA 7470A

Prep Method: EPA 7470A

TCLP Batch ID: E0907-150317

Prep Batch ID: E0897-90

Data Entered By: ShayJ

Sampling Date: 3/12/2015

Cleanup Batch ID:

Peer Reviewed By: WaiteD

Analysis Date: 3/19/2015

Analysis Batch ID: 150319 Hg AGMT1796

Parameter	CAS Nbr	DF	Result	Flag	LOQ	LOD	Test Units	Project Limits
Mercury	7439-97-6	5.0	ND		10.000	10.000	ug/L	0.025 mg/L TCLP

QC Issues

7470

There was a low matrix spike recovery for mercury (73%). The mercury LCS recovery (102%) and the MS/MSD RPD (0%) were within acceptance limits. This indicates that the analytical process was in control and that the low matrix spike recovery was a product of matrix interference. Batch QC Smp: KE1576110

Projects differ from one another in their requirements. The client must ensure that all analytes needed are present and that the reporting limits are appropriate for the data's use. Project Limits are provided as a best-faith effort courtesy. The Client is solely responsible for ensuring that these limits are correct for their project.

**** END OF TEST GROUP ****

Lab Manager
Richard Roylance
(308) 235-8222

2247 South Highway 71 *

Kimball Laboratory
Kimball * NE 69145 US

Untreated Waste Analysis: ID CHRT20231

HSWA Analytical Review

Matrix Spray Dryer Solid

BOX ID CHRT20231

IN SERVICE DATE

From: 12/11/2014
To: 12/14/2014

YES NO

Dioxin Campaign:

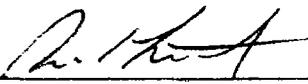
K061 Campaign:

FAILED TREATMENT STANDARDS

TCLP Metals
Daily Composite

Analyte	Waste Codes	Treatment Standard (mg/L)	Result	Units
Cd	D006 F006-009 F011-12 F039 K028 K069 K100 UTS	0.11	2.82	mg/L
Pb	F006-009 F011-012 F039 K001 K048 K082 K069 K086-087 K100 P110 U051 U144-146 UTS	0.75	1.66	mg/L
Hg	D009	0.2	36.5	mg/L
Hg	F039 K071 K106 P092 UTS	0.025	36.5	mg/L
Ag	D011 F006-009 F011-12 F039 P099 P104 UTS	0.14	0.161	mg/L
Zn	K061 UTS	4.3	26	mg/L

ROLLOFF BOX
TOTAL MERCURY 436mg/Kg

Reviewed by: 

Untreated Waste Analysis: ID CHRT20231

<i>LIMS Number</i>	1501057	<i>Sample Fraction</i>	18	<i>Sample Fraction ID</i>	
<i>Sample Date</i>	1/7/2015	Hg		<i>Report</i>	CHRT20231
Spray dryer		<i>Result</i>		<i>Units</i>	<i>Limit</i>
				<i>Analyst</i>	<i>Date of Analysis</i>

Metals

Mercury 7471A	436	mg/Kg	0.055	gt	1/9/2015
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Post-treatment Waste Analysis: ID CHRT20231



Clean Harbors, Inc. Laboratory Test Report

Report ID
20150326747
Thursday, March 26, 2015

All results are reported on a wet-weight basis unless otherwise noted.

Client ID CHRT20231-1

Lab Sample ID KE1576116

SDG 1796

Test *Metals NWW UTS (liquids)

Analytical Method: EPA 6010C

Prep Method: EPA 3005A

TCLP Batch ID: NA

Prep Batch ID: E0916-15

Data Entered By: ShayJ

Sampling Date: 3/12/2015

Cleanup Batch ID:

Peer Reviewed By: WaiteD

Analysis Date: 3/20/2015

Analysis Batch ID: 150320 OES GMT 1796

Parameter	CAS Nbr	DF	Result	Flag	LOQ	LOD	Test Units	Project Limits
Antimony	7440-36-0	1.0	ND		0.200	0.100	mg/L	1.15 mg/L TCLP
Arsenic	7440-38-2	1.0	ND		0.300	0.300	mg/L	5.0 mg/L TCLP
Barium	7440-39-3	1.0	0.426		0.100	0.010	mg/L	21 mg/L TCLP
Beryllium	7440-41-7	1.0	ND		0.200	0.200	mg/L	1.22 mg/L TCLP
Cadmium	7440-43-9	1.0	ND		0.100	0.030	mg/L	0.11 mg/L TCLP
Chromium	7440-47-3	1.0	ND		0.100	0.050	mg/L	0.60 mg/L TCLP
Lead	7439-92-1	1.0	ND		0.100	0.100	mg/L	0.75 mg/L TCLP
Nickel	7440-02-0	1.0	ND		0.100	0.100	mg/L	11 mg/L TCLP
Selenium	7782-49-2	1.0	ND		0.500	0.250	mg/L	5.7 mg/L TCLP
Silver	7440-22-4	1.0	ND		0.100	0.100	mg/L	0.14 mg/L TCLP
Thallium	7740-28-0	1.0	ND		0.200	0.100	mg/L	0.20 mg/L TCLP
Vanadium	7440-62-2	1.0	ND		0.100	0.100	mg/L	1.6 mg/L TCLP
Zinc	7440-66-6	1.0	ND		1.100	0.550	mg/L	4.3 mg/L TCLP

QC Issues

3005

There were low matrix spike recoveries for barium (38%), lead (63%), nickel (70%), selenium (10%) and thallium (64%). The LCS results were within acceptance limits. All MS/MSD RPDs were within acceptance limits except for selenium. This indicates that the analytical process was in control and that the low matrix spike results were a product of matrix interference. None of the samples had barium or selenium concentrations within 80% to 100% of the UTS limit.

Batch QC Smp: KE1576110

Projects differ from one another in their requirements. The client must ensure that all analytes needed are present and that the reporting limits are appropriate for the data's use. Project Limits are provided as a best-faith effort courtesy. The Client is solely responsible for ensuring that these limits are correct for their project.

**** END OF TEST GROUP ****

Lab Manager
Richard Roylance
(308) 235-8222

2247 South Highway 71 *

Kimball Laboratory
Kimball * NE 69145 US

Test Report Page 4 of 5

Post-treatment Waste Analysis: ID CHRT20231



Clean Harbors, Inc. Laboratory Test Report

Report ID
20150326747
Thursday, March 26, 2015

All results are reported on a wet-weight basis unless otherwise noted.

Client ID CHRT20231-1

Lab Sample ID KE1576116

SDG 1796

Test *Mercury NWW UTS (liquids)

Analytical Method: EPA 7470A

Prep Method: EPA 7470A

TCLP Batch ID: E0907-150317

Prep Batch ID: E0897-90

Data Entered By: ShayJ

Sampling Date: 3/12/2015

Cleanup Batch ID:

Peer Reviewed By: WaiteD

Analysis Date: 3/19/2015

Analysis Batch ID: 150319 Hg AGMT1796

Parameter	CAS Nbr	DF	Result	Flag	LOQ	LOD	Test Units	Project Limits
Mercury	7439-97-6	5.0	ND		10.000	10.000	ug/L	0.025 mg/L TCLP

QC Issues

7470

There was a low matrix spike recovery for mercury (73%). The mercury LCS recovery (102%) and the MS/MSD RPD (0%) were within acceptance limits. This indicates that the analytical process was in control and that the low matrix spike recovery was a product of matrix interference. Batch QC Smp: KE1576110

Projects differ from one another in their requirements. The client must ensure that all analytes needed are present and that the reporting limits are appropriate for the data's use. Project Limits are provided as a best-faith effort courtesy. The Client is solely responsible for ensuring that these limits are correct for their project.

**** END OF TEST GROUP ****

Lab Manager
Richard Roylance
(308) 235-8222

2247 South Highway 71 *

Kimball Laboratory
Kimball * NE 69145 US

WASTE MANAGEMENT AND RADIATION CONTROL BOARD

Executive Summary

REQUEST FOR A SITE-SPECIFIC TREATMENT VARIANCE

EnergySolutions, LLC

November 12, 2015

<p>What is the issue before the Board?</p>	<p>On November 4, 2015, EnergySolutions, LLC submitted a request to the Director of the Division of Waste Management and Radiation Control for a site-specific treatment variance from the Hazardous Waste Management Rules. EnergySolutions seeks authorization to receive Cemented Uranium Extraction Process Residues for disposal.</p>
<p>What is the historical background or context for this issue?</p>	<p>The Mixed Waste Facility proposes to receive up to 600 cubic feet of cemented monoliths containing enriched uranium residuals.</p> <p>This material retains hazardous waste codes for barium, cadmium, chromium, lead and spent solvents. The generator has encapsulated the waste in concrete for security reasons.</p> <p>EnergySolutions proposes to receive this waste for macroencapsulation in the Mixed Waste Landfill Cell rather than chemical stabilization, as required. This request is based on the fact that the waste has already been encapsulated in concrete at the generator's site. Treating this waste by the required method would mean grinding the waste and potentially exposing workers to unnecessary contamination.</p> <p>The proposed treatment will further encapsulate the waste and protect it from contact with precipitation, thereby decreasing the potential of leaching.</p> <p>If approved, this variance will be in effect for one year.</p> <p>A notice for public comment was published in <i>The Salt Lake Tribune</i>, <i>The Deseret Morning News</i> and <i>The Tooele County Transcript Bulletin</i>. The comment period will begin November 10, 2015 and will end December 9, 2015.</p>

What is the governing statutory or regulatory citation?	Variances are provided for in 19-6-111 of the Utah Solid and Hazardous Waste Act and R315-2-13 of the Utah Administrative Code. This is a site-specific variance from an applicable treatment standard as allowed by R315-13-1 (40 CFR 268.44(h)(2) by reference).
Is Board action required?	No, this is an informational item before the Board.
What is the Director's recommendation?	The Director will provide a recommendation at the next Board Meeting.
Where can more information be obtained?	For technical questions, please call Otis Willoughby (801) 536-0220. For legal questions, please call Raymond Wixom at (801) 536-0290.



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DSHW-2015-011435

November 4, 2015

CD15-0254

Mr. Scott T. Anderson
Director
Division of Waste Management and Radiation Control
195 North 1950 West
Salt Lake City, UT 84114-4880

Subject: EPA ID Number UTD982598898 ✓
Request for a Site-Specific Treatment Variance for Cemented Uranium
Extraction Process Residues

Dear Mr. Anderson:

EnergySolutions hereby requests an exemption from the treatment standards of 40 CFR 268.40(a)(2) for uranium extraction process residuals that retain the hazardous waste codes D005 (barium); D006 (cadmium); D007 (chromium); D008 (lead); D030 (2,4-dinitrotoluene); D032 (hexachlorobenzene) and F001, F002, and F005 (spent solvents) and are encased in cement. This exemption is requested for the purposes of safety, security, and transportation of the radioactive waste.

This request is submitted in accordance with R315-13-1 (40 CFR 268.44 incorporated by reference) which allows a site-specific variance from an applicable treatment standard provided the following condition is met:

40 CFR 268.44(h)(2) It is inappropriate to require the waste to be treated to the level specified in the treatment standard or by the method specified as the treatment standard, even though such treatment is technically possible.

This request is submitted in accordance with the requirements of 40 CFR 260.20(b).

40 CFR 260.20(b)(1): This petition is being submitted by

EnergySolutions LLC
299 South Main Street, Suite 1700
Salt Lake City, UT 84111

40 CFR 260.20(b)(2): EnergySolutions requests approval to receive, macroencapsulate, and dispose, in EnergySolutions' Clive Facility Mixed Waste Landfill Cell, approximately 600 cubic feet of cemented (monolithic) uranium extraction process residues that retains the characteristic hazardous waste codes D005, D006, D007, D008, D030, and D032; and the listed hazardous waste codes F001, F002, and F003. All actions requested in this variance will be performed in accordance with EnergySolutions' State-issued Part B Permit.

40 CFR 260.20(b)(3): EnergySolutions proposes that the monolithic waste forms, after acceptance at the facility in accordance with EnergySolutions' Clive Facility State-issued Part B Permit, be macroencapsulated in accordance with permit requirements and disposed in the Mixed Waste Landfill Cell.

40 CFR 260.20(b)(4): The need and justification for this action are as follows.

This variance is being requested for approximately 600 cubic feet of cemented uranium extraction process residuals from EnergySolutions generator 9061-06. The waste is generated as part of a uranium recovery process that involves creating an enriched uranium contaminated ash through a thermal process and then recovering the enriched uranium through an organic solvent extraction process. The residual waste from this extraction system is collected in small cans (~ 2 ½ gallons each) and stored at the generator's facility. The process residuals within these cans are in the form of an ash generated through this process. The process residuals within the cans have been characterized through a random sampling and analysis process. At the beginning of this campaign, approximately 2,000 cans of process residues were collected and stored by the generator. The process is ongoing and additional cans are being generated every year. Further, due to safety concerns, some of the cans are being split prior to the repackaging process described below; thereby generating more total material for disposal than originally anticipated.

F-listed solvent codes within this waste are derived from rags that are burned in a furnace in order to recover the uranium present within them. None of the F-listed constituents were present above Universal Treatment Standard (UTS) concentrations within the random characterization samples of the process residues. The random characterization samples were also analyzed for metals using the Toxicity Characteristic Leaching Procedure (TCLP). These samples detected elevated concentrations of barium (up to 6,740 mg/L TCLP), cadmium (up to 16.4 mg/L TCLP), chromium (up to 15.2 mg/L TCLP), and lead (up to 10.5 mg/L TCLP). Based on these elevated metal concentrations, the characteristic waste codes D005, D006, D007, and D008 were applied to the process residue. Slightly elevated concentrations of 2,4-dinitrotoluene (D030) and hexachlorobutadiene (D032) were also detected in separate analyses. The residue may potentially contain these codes also.

The uranium content within the process residues is enriched. From a health and safety standpoint, the enrichment makes the waste more hazardous to employees managing the waste. Further, enriched material has increased security concerns and must be managed appropriately. To ensure the enriched uranium concentration limits required for worker safety, security, and transportation of this waste are met, appropriate packaging procedures were created and are currently being utilized at the generator's facility. These packaging procedures include repackaging the cans into 16-gallon drums and filling the void spaces with cement; formal treatment for the elevated metals concentrations is not performed during this process. The

generator has assessed other options, including treatment for the hazardous constituents; however, additional processing introduced unacceptable hazards from a health and safety, and security viewpoint. Additionally, the waste within the cans is inherently safe from a criticality aspect and the generator concluded that it is unwise to perform extra processing that could potentially change this aspect. Furthermore, encasing enriched uranium within concrete is the preferred method of stabilization as recommended by the Nuclear Regulatory Commission (NRC). The waste material packaged in these 16-gallon monolithic forms is inherently safe and is the form that will be shipped and received at the EnergySolutions Clive facility.

The characteristic hazardous waste codes associated with the process residues has numerical concentration-based treatment standards based upon the leachability of the contaminants. Treatment of the monolithic form for these concentration-based treatment standards would entail a process that includes shredding of the monolith followed by mixing with a stabilizing reagent in a permitted mixer. Both of these steps could mobilize the enriched uranium and possibly cause airborne contamination, increasing the potential for releases to the environment as well as the potential for personnel exposure; thereby violating radiation protection (ALARA) principles. Also, the shredding of the solidified uranium ash results in a more accessible form of enriched uranium with potential security ramifications.

EnergySolutions proposes to macroencapsulate the waste, thereby isolating the waste from potential leaching media. Macroencapsulation is a permitted process utilized at the Clive facility that significantly reduces the potential for migration (leaching) of waste. Macroencapsulation requires less handling of the waste and creates a waste form for disposal that is protective of human health and the environment. Macroencapsulation also adds a further level of security to the access of the enriched uranium.

In summary, a variance should be granted based upon three considerations:

1. for both health and security reasons, enriched uranium concentration within the waste precludes actual treatment of the waste;
2. processing this waste in preparation for stabilization treatment would increase worker exposures and the potential for releases to the environment; and
3. the leachability of the waste would be significantly reduced through macroencapsulation, thereby protecting human health and the environment.

EnergySolutions requested this same variance for this generator in letters dated July 20, 2007, July 28, 2008, July 15, 2009, July 15, 2010, July 28, 2011, August 13, 2012, July 15, 2013, and July 25, 2015. These previous requests were approved on September 13, 2007, September 13,

2008, September 10, 2009, September 9, 2010, September 8, 2011, September 13, 2012, September 12, 2013, and August 14, 2014.

Shipments began in April, 2008 and have been relatively continuous since that time. Since the last variance was approved, EnergySolutions has received approximately 374 cubic feet of this waste (the 16-gallon monoliths). EnergySolutions has received approximately 7,050 cubic feet of this waste since the first variance approval in 2008. This variance request is for the ongoing processing and disposal of additional uranium extraction process residues created by the generator.

EnergySolutions requests that a variance be granted to allow the receipt, macroencapsulation treatment, and disposal of approximately 600 cubic feet of cemented uranium extraction process residuals that retain hazardous waste codes.

Upon approval of this variance, the monolithic waste will be managed as debris.

The name, phone number, and address of the person who should be contacted to notify EnergySolutions of decisions by the Director is:

Mr. Vern C. Rogers
Manager, Compliance and Permitting
EnergySolutions LLC
299 South Main Street, Suite 1700
Salt Lake City, UT 84111
(801) 649-2000

Should there be any questions to this request, please contact me at 801-649-2144.

Sincerely,



Timothy L. Orton, P.E.
Environmental Engineer

cc: Don Verbica, DWMRC

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.