

State of Oregon
Department of Environmental Quality

Memorandum

Date: May 30, 2013

To: Environmental Quality Commission

From: Dick Pedersen, Director

Subject: Agenda item C, Informational item: Umatilla Chemical Demilitarization Program status update
June 19-20, 2013, EQC meeting

Purpose of item This item will inform the commission about closure activities and project status at the Umatilla Chemical Agent Disposal Facility and the Umatilla Chemical Depot as of April 30, 2013.

Depot status The Umatilla Chemical Depot was closed under a General Order of Closure Aug. 1, 2012. The depot is currently under Base Realignment and Closure authority and the disposal facility is a tenant. The U.S Army Chemical Materials Agency is conducting closure activities for hazardous waste storage units, including cleanup and sampling of igloos and other storage areas.

Program news The Umatilla facility destroyed the last agent-filled munitions in its stockpile Oct. 25, 2011. The facility had been conducting decontamination, dismantling and equipment removal activities associated with closure of the facility until Jan. 17, 2013, when the final closure plan was approved for the facility and all closure activities could begin. The facility treated non-liquid secondary wastes through the metal parts furnace until Feb. 8, 2013. All incinerators are now shut down and closure activities have begun on the incinerators.

Secondary waste

The facility has sent all agent-contaminated wastes generated since the shutdown of the metal parts furnace to a commercial RCRA-permitted incinerator, in accordance with the facility's Waste Analysis Plan. The facility will determine the type of wastes that are generated during closure and ship the materials to the appropriate disposal facility. This ensures that the waste can be shipped safely and efficiently to the appropriate disposal facility as required in federal and state law.

Facility safety

As of May, the facility reported approximately 11.5 million work hours without a lost-time injury. The last lost-time injuries occurred in 2006.

Other notable activities

The engineer who will certify plant closure and the demolition contractor, whose work included the demolition of the Johnston Atoll Chemical Agent Disposal System, recently briefed DEQ staff. The demolition contractor is currently scheduled to begin in September. All other facility buildings will remain after closure and are slated for reuse as industrial property.

Permitting updates

DEQ received and approved one new permit modification during the reporting period. DEQ staff have reviewed a draft update to the Depot closure plan and provided comments. The Depot will finalize the proposed update and submit it as a permit modification in the next month.

Significant events at other facilities

The U.S. Army Chemical Materials Agency has eliminated 90 percent of the national chemical weapons stockpile to date.

Tooele Chemical Agent Disposal Facility

This facility completed agent disposal operations Jan. 21, 2012, and is currently processing secondary waste in its Metal Parts Furnace. The facility is preparing for completion of unventilated monitoring tests. The Drum Ventilation System and Autoclave have been shut down and are being decommissioned.

Chemical Agent Munitions Disposal System

This facility has been demolished and it is going through permit close out.

Anniston Chemical Agent Disposal Facility

This facility operated from Aug. 9, 2003, to Sept. 22, 2011. The facility has shut down all of its furnaces and is preparing for completion of unventilated monitoring tests. The Static Detonation Chamber continues to process conventional munitions.

Pine Bluff Chemical Agent Disposal Facility

The demolition of this facility has been completed. It has received notification from the Arkansas Department of Environmental Quality accepting the RCRA clean closure of the facility and for termination of the facility's RCRA permit.

Newport Chemical Agent Disposal Facility

This facility is closed, and the property was transferred to the Army's Base Realignment and Closure division July 18, 2010.

Blue Grass Chemical Agent Destruction Pilot Plant

This facility is still under construction and scheduled to begin operations in 2018. The plant will use neutralization followed by supercritical water oxidation to destroy 523 tons of nerve and mustard agents, with hydrolysate to be processed on-site.

Pueblo Chemical Agent Destruction Pilot Plant

The facility is currently conducting systemization activities and should start operations in 2015. The plant will use neutralization followed by biotreatment to destroy 2,611 HD tons in artillery and mortar projectiles, with hydrolysate to be processed on-site.

Report prepared by: Lissa Druback

**DEPARTMENT OF ENVIRONMENTAL QUALITY
STATEMENT OF NEED AND JUSTIFICATION**

A Certificate and Order for Filing Temporary Administrative Rules accompanies this form.

Department of Environmental Quality

Agency and Division

OAR Chapter 340

Administrative Rules Chapter Number

Rule Caption: The proposed rule amendments would modify when the hazardous waste “F” listing applies to demilitarization residue that is determined to be free of blister and nerve agents as determined in accordance with the facility permit.

In the Matter of: Temporary Rule Adoption: F listing of Demilitarization Residue, Division 102

Statutory Authority: ORS 466.020

Need for the Temporary Rule(s):

In 2000, the EQC adopted rules related to the appropriate hazardous waste listing for chemical agents and residues from demilitarization, treatment and testing of chemical agents. Demilitarization residues include a substantial portion of the wastes generated during operations and closure of the Umatilla Chemical Demilitarization Facility or Umatilla Chemical Storage Depot. The hazardous waste listing rule, which applies only in Oregon, ensured that these waste streams would be considered a hazardous waste regardless of whether they actually contained chemical agent or exhibited any hazardous waste characteristics. Since the time this rule went into place, scientific data has been developed that establishes safe levels of chemical agent. The facility has conducted analytical testing of the structure that is required by the permit to be demolished and DEQ has determined that these tests illustrate that the building and its components meet the definition of being “agent free” under the facility permit. Adoption of this temporary rule would allow demolition debris from the facility which has been determined to meet the definition of “agent free” under the facility permit and which is not otherwise considered to be hazardous waste to be managed on the ground as a solid waste prior to being placed in a container. This will allow the facility to size reduce the waste and utilize some of it to create ramps for easier access to the building for continued demolition prior to it being placed in a container. Once the waste is in a container it will be considered F listed hazardous waste and will be required to be transported and disposed of at a hazardous waste permitted treatment, storage, and disposal facility.

Documents Relied Upon: Documents relied upon are available by contacting DEQ or online as follows:

- Munitions Demilitarization Building Concrete Chip Sample Results Report and Results of Unventilated Monitoring Tests for the Munitions Demilitarization Building [NEED LINK](#)

Justification of Temporary Rule(s): The Commission finds that failure to promptly adopt the temporary rules will result in serious prejudice to the interests of the permittee and the public because it will have the following consequences:

Under the current rules, the permittee would be required to manage all demolition debris as hazardous waste. Requiring this type of management during the facility’s demolition would be burdensome and excessive and would not result in any additional protection to human health and the environment. Further, it would negatively impact the efficiency of managing these wastes and drastically increase costs and slow down the final closure of the facility.

Housing Cost Impacts:

DEQ determined the proposed rules would have no effect on the development cost of a 6,000-square-foot parcel and construction of a 1,200-square-foot detached, single-family dwelling on that parcel. The proposed rules only affect generators of demilitarization residue. The Umatilla Chemical Demilitarization Facility and the Umatilla Chemical Storage Depot are the only generators of that waste stream in the state.

Dick Pedersen, Director
(On Behalf of the Commission)

Date Signed

Changes in bold

OAR 340-102-0011

* * *

(2) A person who generates a residue as defined in OAR 340-100-0010 must determine if that residue is a hazardous waste using the following method:

* * *

(c) Persons must then determine if the waste is listed under the following listings:

(A) The commercial chemical products, manufacturing chemical intermediates, or off-specification commercial chemical products or manufacturing chemical intermediates identified in 340-102-0011(2)(c)(A)(i) and (ii) are added to and made a part of the list in 40 CFR 261.33(e).

(i) P998...Blister agents (such as Mustard agent)

(ii) P999...Nerve agents (such as GB (Sarin) and VX); or

(B) Hazardous waste identified in 340-102-0011(2)(c)(B)(i) and (ii) are added to and made a part of the list in 40 CFR 261.31.

(i) F998...Residues from demilitarization, treatment, and testing of blister agents (such as Mustard agent).

(ii) F999...Residues from demilitarization, treatment, and testing of nerve agents (such as GB (Sarin) and VX).

NOTE: Even if the waste is listed, the generator still has an opportunity under OAR 340-100-0022 to demonstrate to the Commission that the waste from his/her particular facility or operation is not a hazardous waste.

(C) Notwithstanding OAR 340-100-0010(2)(g) and OAR 340-102-0011(2)(c)(B)(i) and (ii), debris, as defined in 40 CFR 268.2(g), generated from demolition during closure processes and activities at the Umatilla Chemical Agent Disposal Facility (ORQ 000009431) is not F998 or F999 hazardous waste until containerized, provided the following conditions are met:

(i) the debris is free of blister and nerve agent, as determined in accordance with the facility permit;

(ii) the debris does not contain hazardous constituents at levels above otherwise applicable treatment standards; and

(iii) the debris is containerized before leaving the facility.

* * *

Other agent related OARs

340-100-0010(2)

Definitions

(f) "Demilitarization" means all processes and activities at the Umatilla Chemical Depot (OR 6213820917) and Umatilla Chemical Agent Disposal Facility (ORQ 000009431) from February 12, 1997, through Department approval of the closure of all permitted treatment, storage and disposal units and facility-wide corrective action;

(g) "Demilitarization Residue" means any solid waste generated by demilitarization processes and activities as defined in 340-100-0010(2)(f), except for (A) waste streams generated from processes or activities prior to the introduction of nerve or blister agent into the treatment unit; and (B) waste streams generated from maintenance or operation of non-agent contaminated process utility systems;

340-101-0030

Chemical Agent Munitions and Chemical Agent Bulk Items

Notwithstanding any otherwise applicable provisions of 40 CFR 260 to 270, or other provisions of these rules, chemical agent munitions and chemical agent bulk items in storage as of the effective date of this rule are residues, and listed hazardous wastes assigned the appropriate waste codes in OAR 340-102-0011(2)(c)(A)(i) and (ii).



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
US ARMY CHEMICAL MATERIALS ACTIVITY
UMATILLA CHEMICAL AGENT DISPOSAL FACILITY
78072 ORDNANCE ROAD
HERMISTON, OREGON 97838

13-0108

MAY 09 2013

FILE

Scanned

US Army Chemical Materials Activity
UMCDF Field Office

ENV-13-0085

SUBJECT: Umatilla Chemical Agent Disposal Facility (UMCDF) Hazardous Waste Permit
(ORQ 000 009 431-01) – Permit Condition I.M., Request for Information to Support Rulemaking

Elizabeth Druback, Eastern Region Manager
Solid and Hazardous Waste Programs
Oregon Department of Environmental Quality
400 East Scenic Drive, Suite 307
The Dalles, Oregon 97058

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Dept. of Environmental Quality
Eastern Region The Dalles

Dear Ms. Druback:

Based on recent discussions with your office, the Permittees are submitting the enclosed summary of the Unventilated Monitoring Tests (UMTs) conducted in the Munitions Demilitarization Building (MDB), and a copy of the MDB Concrete Chip Sample Report for your review.

As reflected in the enclosures, all UMT's were successfully completed per the requirements of the Closure Plan. Additionally, all concrete chip samples were agent-free in accordance with the Waste Analysis Plan.

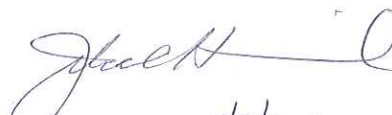
If you have any questions, please call our technical point of contact, Mr. Pat Mohondro, 541-564-7393.

Sincerely,


Date of Signature: 5/9/2013

Gary M. Anderson
UMCDF Site Project Manager

*CERTIFICATION STATEMENT


Date of Signature: 5/8/2013

Julia C. Hamrick
Washington Demilitarization Company, LLC
Project General Manager

*CERTIFICATION STATEMENT

Enclosures

*I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION ACCORDING TO 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.

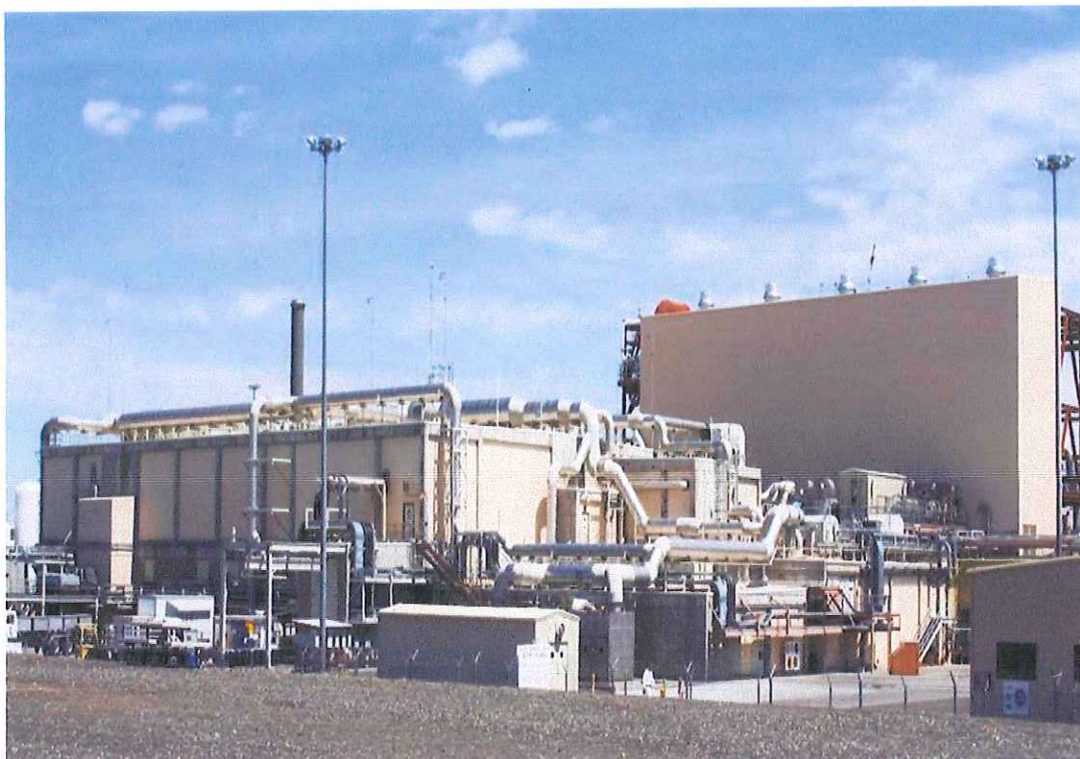
UMT AREA MONITORING RESULTS SUMMARY

	Area Description	Agent Monitored	Highest Reported UMT Result	Results Summary		UMT Success (PASS/FAIL)
				VSL	WPL	
UMT Area 1	LMC, BSA, TMA, TMA Decon (A/B) Area, 111A Airlock, & 123A Airlock	GB	0.01 WPL _{12-HR}	< 1 VSL (< 0.0001 mg/m ³)	< 1 WPL _{12-HR} (< 0.00002 mg/m ³)	PASS
		VX	0.22 WPL _{12-HR}	< 1 VSL (< 0.00001 mg/m ³)	< 1 WPL _{12-HR} (< 0.00000067 mg/m ³)	PASS
		HD	0.64 WPL _{12-HR}	< 1 VSL (< 0.003 mg/m ³)	< 1 WPL _{12-HR} (< 0.00027 mg/m ³)	PASS
UMT Area 2	LIC 1 Primary Room, LIC 2 Primary Room, & LIC A/B Airlock	GB	0.00 WPL _{12-HR}	< 1 VSL (< 0.0001 mg/m ³)	< 1 WPL _{12-HR} (< 0.00002 mg/m ³)	PASS
		VX	0.05 WPL _{12-HR}	< 1 VSL (< 0.00001 mg/m ³)	< 1 WPL _{12-HR} (< 0.00000067 mg/m ³)	PASS
		HD	0.00 WPL _{12-HR}	< 1 VSL (< 0.003 mg/m ³)	< 1 WPL _{12-HR} (< 0.00027 mg/m ³)	PASS
UMT Area 3	SDS Room & TOX	GB	0.08 VSL	< 1 VSL (< 0.0001 mg/m ³)	< 1 WPL _{12-HR} (< 0.00002 mg/m ³)	PASS
		VX	0.47 WPL _{12-HR}	< 1 VSL (< 0.00001 mg/m ³)	< 1 WPL _{12-HR} (< 0.00000067 mg/m ³)	PASS
		HD	0.61 WPL _{12-HR}	< 1 VSL (< 0.003 mg/m ³)	< 1 WPL _{12-HR} (< 0.00027 mg/m ³)	PASS
UMT Area 4	UMC, ECV, 265A Airlock, & 255A Airlock	GB	0.00 WPL _{12-HR}	< 1 VSL (< 0.0001 mg/m ³)	< 1 WPL _{12-HR} (< 0.00002 mg/m ³)	PASS
		VX	0.00 WPL _{12-HR}	< 1 VSL (< 0.00001 mg/m ³)	< 1 WPL _{12-HR} (< 0.00000067 mg/m ³)	PASS
		HD	0.06 WPL _{12-HR}	< 1 VSL (< 0.003 mg/m ³)	< 1 WPL _{12-HR} (< 0.00027 mg/m ³)	PASS
UMT Area 5	MPB	GB	0.06 VSL	< 1 VSL (< 0.0001 mg/m ³)	< 1 WPL _{12-HR} (< 0.00002 mg/m ³)	PASS
		VX	0.72 WPL _{12-HR}	< 1 VSL (< 0.00001 mg/m ³)	< 1 WPL _{12-HR} (< 0.00000067 mg/m ³)	PASS
		HD	0.76 WPL _{12-HR}	< 1 VSL (< 0.003 mg/m ³)	< 1 WPL _{12-HR} (< 0.00027 mg/m ³)	PASS
UMT Area 6	ECR A	GB	0.01 WPL _{12-HR}	< 1 VSL (< 0.0001 mg/m ³)	< 1 WPL _{12-HR} (< 0.00002 mg/m ³)	PASS
		VX	0.66 WPL _{12-HR}	< 1 VSL (< 0.00001 mg/m ³)	< 1 WPL _{12-HR} (< 0.00000067 mg/m ³)	PASS
UMT Area 7	ECR B	GB	0.00 WPL _{12-HR}	< 1 VSL (< 0.0001 mg/m ³)	< 1 WPL _{12-HR} (< 0.00002 mg/m ³)	PASS
		VX	0.19 WPL _{12-HR}	< 1 VSL (< 0.00001 mg/m ³)	< 1 WPL _{12-HR} (< 0.00000067 mg/m ³)	PASS
UMT Area 8	DFS Room	GB	0.00 WPL _{12-HR}	< 1 VSL (< 0.0001 mg/m ³)	< 1 WPL _{12-HR} (< 0.00002 mg/m ³)	PASS
UMT Area 9	HVAC Exhaust Ductwork	GB	0.06 VSL	< 1 VSL (< 0.0001 mg/m ³)	NA ¹	PASS
		VX	0.29 VSL	< 1 VSL (< 0.00001 mg/m ³)	NA ¹	PASS
		HD	0.02 VSL	< 1 VSL (< 0.003 mg/m ³)	NA ¹	PASS
UMT Area 10	MDB HVAC Exhaust Filters	GB	0.03 VSL	< 1 VSL (< 0.0001 mg/m ³)	NA ¹	PASS
		VX	0.32 VSL	< 1 VSL (< 0.00001 mg/m ³)	NA ¹	PASS
		HD	0.27 VSL	< 1 VSL (< 0.003 mg/m ³)	NA ¹	PASS
UMT Area 11	Phase I HD TC Glovebox & Phase II HD TC Glovebox Exhaust System	HD	0.03 VSL	< 1 VSL (< 0.003 mg/m ³)	NA ¹	PASS
UMT Area 12	MPF	GB	0.00 WPL _{12-HR}	< 1 VSL (< 0.0001 mg/m ³)	< 1 WPL _{12-HR} (< 0.00002 mg/m ³)	PASS
		VX	0.06 WPL _{12-HR}	< 1 VSL (< 0.00001 mg/m ³)	< 1 WPL _{12-HR} (< 0.00000067 mg/m ³)	PASS
		HD	0.00 WPL _{12-HR}	< 1 VSL (< 0.003 mg/m ³)	< 1 WPL _{12-HR} (< 0.00027 mg/m ³)	PASS

1. Area not designed for human occupancy; therefore, WPL monitoring is not necessary.

Munitions Demilitarization Building

Concrete Chip Sample Results



May 2013

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List of Appendices (on CD)

Appendix 1 – Drawings and Sample Locations
Appendix 2 – Concrete Chip Standing Operating Procedure
Appendix 3 – Laboratory Analysis for GB, VX and HD (SwRI)
Appendix 4 – Laboratory Analysis for TCLP Metals and TCLP Organics (TestAmerica)

Introduction

During the discussions regarding the closure process of the Umatilla Chemical Agent Disposal Facility (UMCDF), Washington Demilitarization Company (WDC) agreed to sample the concrete floors in the Munitions Demilitarization Building (MDB). The Oregon Department of Environmental Quality (DEQ) approved the wording in the Waste Analysis Plan (WAP), Section 2.2.19, as follows:

Concrete will be sampled for chemical agent prior to demolition. A minimum of one judgmental concrete chip sample will be collected from the floor of each room designated as a category A or A/B area. Depending on the size of the room, additional samples would be collected based on the calculated square footage. As an example, one sample from a single ECR would be sufficient and the area equivalent to one ECR would be the basis for additional sampling in the other A or A/B area. The average size of the ECR's is approximately 700 square feet in size. Therefore, with the exception of the ECR's, all rooms in the MDB designated as category A or A/B, concrete chip sample will be collected at the rate of 1 sample per 700 square feet in each A or A/B area with a minimum of one sample per room. Sample locations will be biased to include areas around sumps and other low lying areas.

Chemical agent analysis on the concrete chip samples will be performed prior to shipment off site for disposal at a permitted Subtitle C TSDF, to verify the waste meets the agent free acceptance criteria listed in Section 8 of this plan. A representative sample will be collected from the waste or a biased sample will be collected if the materials are known to have a higher potential for agent contamination. Concrete will be analyzed for TCLP metals and TCLP organics at a frequency identified in Table 2 of the WAP. (excerpt from page 25 of 70).

The UMCDF Hazardous Waste Permit (ORQ 000 009 431-01) defines the ventilation categories in the MDB based on the cascade air flow system from least contaminated to most contaminated area. Categories A and A/B ventilation areas are defined in Permit Condition I.B.

Category A is defined as: *Toxic process area under negative pressure; routine contamination with either chemical agent liquid or vapor; a high-hazard area.*

Category A/B is defined as: *An A/B area meets all design criteria for an A area, but in typical service act as a B area (i.e., only a vapor chemical agent hazard is present), but under some circumstances, a liquid chemical agent hazard may be present, hence the need for design to meet A area requirements.*

Implementation

To meet the requirement to perform concrete chip sampling in the MDB, the first step was to have Engineering define all of the Category A and A/B rooms, and then to calculate the square footage of each area. Table 1 contains the listing of each room by category, room square footage, reference drawings, and minimum samples. The referenced drawings and sample locations are contained in Appendix 1. All appendices to this report are on the attached Compact Disc (CD).

The second step was to develop a procedure for concrete chip sampling that would be used in the evolution. The concrete chip sampling procedure is contained in Appendix 2. The procedure was submitted to the DEQ and a meeting was held. That meeting resulted in two additional sample locations in each Liquid Incinerator primary room where the agent gun was stored during outages. The total samples taken increased from 45 to 47 concrete chip samples.

The actual concrete chip sampling commenced on January 29, 2013 on the second floor of the MDB and concluded on February 21, 2013 on the first floor of the MDB. Per the concrete chip sampling procedure, if epoxy coating was encountered, that coating was removed prior to taking the chip sample of the concrete. A demolition hammer with a bushing bit was used to remove epoxy. A new/clean bushing bit was used to generate the chips. Each of the 47 chip sample areas had a dedicated sampling kit consisting of two bushing bits (one for epoxy removal; one for chips) and a number 4 sieve assembly stacked on a number 10 sieve assembly on top of a pan. The on site laboratory, where the concrete was analyzed for GB, VX and HD chemical agents, required a concrete chip from the top of the number 10 sieve. Sample bottles, spoon to remove chips from the number 10 sieve screen, dustpan, brushes to sweep chips to the dustpan to place on the number 4 sieve, and four sample bottles comprised a sample kit.

A description of each sample area, the container identification which ties the sample to a room in the MDB and to a location, laboratory sample number and the date sampled is included on Table 2 for Category A areas and Table 3 for Category A/B areas.

Results

Once the agent free status was determined, the remaining sample containers were shipped offsite to TestAmerica (Sacramento, CA) for Toxicity Characteristic Leachate Procedure (TCLP) organic and TCLP metals analyses as required by the WAP. The WAP required analytical results for TCLP metals and TCLP organics are presented on Table 4. The full laboratory reports for agent analyses are in Appendix 3. The full laboratory reports for TCLP metals and TCLP organics are in Appendix 4 on the attached CD.

For the TCLP analyses, results were reported by the laboratory that included several analyses from which results were taken from diluted analyses. For two WAP-required TCLP semivolatile organics, hexachlorobenzene and 2,4-dinitrotoluene, the diluted results for the six samples from the Munitions Processing Bay (MPB), one sample from the Toxic Cubicle (TOX), and one sample from the Spent Decontamination Solution (SDS) Room, yielded non-detect values where the dilution-adjusted reporting limit was above the regulatory limit. For the six samples from the MPB, the laboratory had analyzed the samples without dilution prior to performing the diluted analysis from which the original results were reported. As these undiluted analyses yielded usable results for hexachlorobenzene and 2,4-dinitrotoluene, the laboratory was able to report the results from the undiluted analyses for these two analytes in addition to the results from the diluted analyses. For the one sample from the TOX and one sample from the SDS Room, the samples were not initially analyzed at a lesser dilution. As the holding time from extraction to analysis had not expired, the laboratory reanalyzed these samples at a lesser dilution to provide results for hexachlorobenzene and 2,4-dinitrotoluene where the reporting limit

is less than the regulatory limit. The results from the lesser diluted analyses have been reported in addition to the results from the more diluted analyses.

On March 27 and March 28, WDC personnel re-sampled the eight locations discussed above regarding dilution. Samples from the re-sampled locations were analyzed for TCLP semivolatile organics. All WAP-required TCLP semivolatile organics were non-detect, including hexachlorobenzene and 2,4-dinitrotoluene. Both the original analytical result and the resample analytical results are included on Table 4 for the MPB, the TOX and SDS rooms.

Summary

All 47 samples were less than the permit compliance concentration (PCC) for GB, VX, and HD chemical agent. By the Hazardous Waste Permit, these samples are considered agent free. A waste determination can be made in accordance with 40 Code of Federal Regulations (CFR) 261.24. None of the results indicate any toxicity characteristics; thus, no Federal or Oregon waste codes for toxicity characteristics are applicable.

TABLE 1. LISTING OF EACH ROOM BY CATEGORY

Room Name	Room Number	Room Area, square feet	Reference Drawings	Required Samples
Category A				
Airlock (111A) - 1st Floor	06-164	200	UM-01-S-0002	1
Airlock (123A) - 1st Floor Mezzanine	06-169	182	UM-01-S-0063	1
Airlock (255A) - 2nd Floor Mezzanine	06-221	128	UM-01-S-0063	1
Airlock (265A) - 2nd Floor Mezzanine	06-217	200	UM-01-S-0063	1
Buffer Storage Area (BSA)	17-146	2313	UM-01-S-0004	4
Explosive Containment Room A (ECRA)	03-211	689	UM-01-S-0015	1
Explosive Containment Room B (ECRB)	03-212	770	UM-01-S-0015	2
Munitions Processing Bay (MPB)	10-205	4055	UM-01-S-0014 UM-01-S-0019	6
Spent Decontamination Solution (SDS)	21-140	832	UM-01-S-0005	2
Toxic Maintenance Area (TMA)	12-120	1263	UM-01-S-0004 UM-01-S-0009	2
Toxic Cubicle (TOX)	11-141	411	UM-01-S-0004 UM-01-S-0005	1
Category A/B				
ECR Vestibule (ECV)	04-213	2349	UM-01-S-0014 UM-01-S-0015 UM-01-S-0016	4
Liquid Incinerator (LIC) Airlock	13-154	203	UM-01-S-0002	1
Liquid Incinerator 1 (LIC1) Primary	13-155	626	UM-01-S-0002	1
Liquid Incinerator 2 (LIC2) Primary	13-158	626	UM-01-S-0002	1
Lower Munitions Corridor (LMC)	05-153	2352	UM-01-S-0003 UM-01-S-0004 UM-01-S-0005	4
Toxic Maintenance Area (TMA) Decontamination Area	12-118	672	UM-01-S-0004 UM-01-S-0009 UM-01-A-0010	1
Upper Munitions Corridor (UMC)	05-210	7510	UM-01-S-0014 UM-01-S-0015 UM-01-S-0016 UM-01-S-0017 UM-01-S-0018 UM-01-S-0019	11

**TABLE 2. CATEGORY A
SAMPLE AREA, CONTAINER IDENTIFIER, LABORATORY SAMPLE
IDENTIFIER, DATE SAMPLED, and DATE ANALYZED for AGENTS**

Sample Area	Container Identifier	Laboratory Sample Identifier	Date Sampled	Date Analyzed for Agents
111-A Airlock by sump 134	06-164-001	5151302817-A	19 February 2013	19 February 2013
123-A Airlock by sump 125	06-169-001	5151302818-A	21 February 2013	21 February 2013
255-A Airlock by sump 124	06-221-001	5151302800-A	31 January 2013	1 February 2013
265-A Airlock bottom of sump 126	06-217-001	5151302801-A	31 January 2013	1 February 2013
Buffer Storage Area by North stairs	17-146-001	5151302819-A	18 February 2013	18 February 2013
Buffer Storage by sump 190	17-146-002	5151302821-A	18 February 2013	18 February 2013
Buffer Storage by sump 164	17-146-003	5151302823-A	18 February 2013	18 February 2013
Buffer Storage by south stairs	17-146-004	5151302824-A	18 February 2013	18 February 2013
Explosive Containment Room A near sump 107	03-211-001	4F61302800-A	29 January 2013	30 January 2013
Explosive Containment Room B near rocket punch and drain station	03-212-001	4F61302801-A	29 January 2013	30 January 2013
Explosive Containment Room B near sump 106	03-212-002	4F61302802-A	29 January 2013	30 January 2013
Munitions Processing Bay near MDM 101	10-205-001 10-205-101 [†]	4F61302803-A 68B1308600-A	4 February 2013 28 March 2013	5 February 2013 Not Applicable
Munitions Processing Bay near MDM 102	10-205-002 10-205-102 [†]	4F61302804-A 6611308600-A	4 February 2013 28 March 2013	5 February 2013 Not Applicable
Munitions Processing Bay near MDM 103	10-205-003 10-205-103 [†]	4F61302805-A 6621308600-A	4 February 2013 28 March 2013	5 February 2013 Not Applicable
Munitions Processing Bay by HD spill on overfilled ton container	10-205-004 10-205-104 [†]	4F61302806-A 6621308601-A	4-February 2013 28 March 2013	5 February 2013 Not Applicable
Munitions Processing Bay by BDS 101	10-205-005 10-205-105 [†]	4F61302807-A 6621308603-A	4 February 2013 28 March 2013	5 February 2013 Not Applicable
Munitions Processing Bay by BDS 102	10-205-006 10-205-106 [†]	4F61302808-A 6621308604-A	4 February 2013 28 March 2013	5 February 2013 Not Applicable
Spent Decontamination Solution by ACS-Tank-108	21-140-001 21-140-101 [†]	5151302825-A 6621308605-A	19 February 2013 27 March 2013	19 February 2013 Not Applicable
Spent Decontamination Solution by sump 150	21-140-002	5151302826-A	19 February 2013	19 February 2013
Toxic Maintenance Area by sump 135	12-120-001	5151302827-A	21 February 2013	21 February 2013
Toxic Maintenance Area by sump 154	12-120-002	5151302828-A	21 February 2013	21 February 2013
Toxic Cubicle where agent tanks located	11-141-001 11-141-101 [†]	5151302829-A 6621308606-A	19 February 2013 27 March 2013	19 February 2013 Not Applicable

[†] Location was resampled and analyzed for TCLP semivolatile organics only.

TABLE 3. CATEGORY A/B
SAMPLE AREA, CONTAINER IDENTIFIER, LABORATORY SAMPLE
IDENTIFIER, DATE SAMPLED, and DATE ANALYZED for AGENTS

Sample Area	Container Identifier	Laboratory Sample Identifier	Date Sampled	Date Analyzed for Agents
Explosive Containment Vestibule by sump 109	04-213-001	5151302802-A	29 January 2013	30 January 2013
Explosive Containment Vestibule near strainers for Rinsate Collection System (RCS)	04-213-002	5151302803-A	29 January 2013	30 January 2013
Explosive Containment Vestibule near sump 108	04-213-003	5151302804-A	29 January 2013	30 January 2013
Explosive Containment Vestibule near sump 110	04-213-004	5151302805-A	29 January 2013	30 January 2013
Liquid Incinerators Plenum/Airlock near sump 154	13-154-001	5151302830-A	19 February 2013	19 February 2013
Liquid Incinerator # 1 Primary near sump 188	13-155-001	5151302831-A	19 February 2013	19 February 2013
Liquid Incinerator #1 Primary where agent gun stored*	13-155-002	5151302832-A	19 February 2013	19 February 2013
Liquid Incinerator # 2 Primary near sump 157	13-158-001	5151302833-A	19 February 2013	19 February 2013
Liquid Incinerator # 2 Primary where agent gun stored*	13-158-002	5151302834-A	19 February 2013	19 February 2013
Lower Munitions Corridor by sump 184	05-153-001	5151302835-A	18 February 2013	18 February 2013
Lower Munitions Corridor at decontamination station	05-153-002	5151302836-A	18 February 2013	18 February 2013
Lower Munitions Corridor in sump 179	05-153-003	5151302837-A	18 February 2013	18 February 2013
Lower Munitions Corridor at slope to sump 179	05-153-004	5151302838-A	18 February 2013	18 February 2013
Toxic Munitions Area Decontamination between scissor lift rails	12-118-001	5151302839-A	21 February 2013	21 February 2013
Upper Munitions Corridor by sump 189	05-210-001	5151302806-A	30 January 2013	30 January 2013
Upper Munitions Corridor by sump 112	05-210-002	5151302807-A	30 January 2013	30 January 2013
Upper Munitions Corridor by sump 116	05-210-003	5151302808-A	30 January 2013	30 January 2013
Upper Munitions Corridor by sump 115	05-210-004	5151302809-A	30 January 2013	30 January 2013
Upper Munitions Corridor by sump 118	05-210-005	5151302810-A	30 January 2013	30 January 2013
Upper Munitions Corridor by sump 174	05-210-006	5151302811-A	29 January 2013	30 January 2013
Upper Munitions Corridor by sump 114	05-210-007	5151302812-A	30 January 2013	30 January 2013
Upper Munitions Corridor by sump 169	05-210-008	5151302813-A	29 January 2013	30 January 2013
Upper Munitions Corridor by sump 113	05-210-009	5151302814-A	30 January 2013	30 January 2013
Upper Munitions Corridor by sump 117	05-210-010	5151302815-A	30 January 2013	30 January 2013
Upper Munitions Corridor by secondary waste drop zone 1	05-210-011	5151302816-A	30 January 2013	30 January 2013

- “*” samples added to the minimum stated on Table 1

TABLE 4. RESULTS SUMMARY (continued)

Analyte	CASRN	Regulated Level	320-1650-5		320-1650-6		320-1678-2		320-1678-3		320-1678-4		320-1678-5		320-1678-6	
			ECRB	ECRB	Airlock 255A	Airlock 265A	UMC	UMC	UMC	UMC	UMC	UMC	UMC	UMC	UMC	
			03-212-001	03-212-002	06-221-001	06-217-001	05-210-001	05-210-002	05-210-003	5151302801-A	5151302806-A	5151302807-A	5151302808-A			
			4F61302801-A	4F61302802-A	5151302800-A	5151302801-A	5151302806-A	5151302807-A	5151302808-A							
Chemical Agent, ug/Kg (ppb)																
GB	107-44-8	16	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	
VX	50782-69-9	13	ND (<13)	ND (<13)	ND (<13)	ND (<13)	ND (<13)	ND (<13)	ND (<13)	ND (<13)	ND (<13)	ND (<13)	ND (<13)	ND (<13)	ND (<13)	
HD	505-60-2	152	ND (<152)	ND (<152)	ND (<152)	ND (<152)	ND (<152)	ND (<152)	ND (<152)	ND (<152)	ND (<152)	ND (<152)	ND (<152)	ND (<152)	ND (<152)	
TCPLP Metals, mg/Kg (ppm)																
Arsenic	7440-38-2	5.0	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	
Barium	7440-39-3	100	0.46 J	0.57 J	1.2 J	0.76 J	0.69 J	0.72 J	0.72 J	0.72 J	0.72 J	0.72 J	0.72 J	0.72 J	0.72 J	
Cadmium	7440-43-9	1.0	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	
Chromium	7440-47-3	5.0	0.059	0.041	0.032	0.045	0.031	0.039	0.042	0.042	0.042	0.042	0.042	0.042	0.042	
Lead	7439-92-1	5.0	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	
Mercury	7439-97-6	0.2	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)	
Selenium	7782-49-2	1.0	ND (<0.02)	0.044	ND (<0.02)	0.11	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	
Silver	7440-22-4	5.0	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	
TCPLP Volatile Organics, mg/L (ppm)																
Benzene	71-43-2	0.5	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	
Carbon tetrachloride	56-23-5	0.5	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	
Chlorobenzene	108-90-7	100.0	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	
Chloroform	67-66-3	6.0	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	
1,4-Dichlorobenzene	106-46-7	7.5	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	
1,2-Dichloroethane	107-06-2	0.5	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	
1,1-Dichloroethylene (1,1-Dichloroethene)	75-35-4	0.7	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	
Methyl ethyl ketone (2-Butanone, MEK)	78-93-3	200.0	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	
Tetrachloroethylene (Tetrachloroethene)	127-18-4	0.7	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	
Trichloroethylene (Trichloroethene)	79-01-6	0.5	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	
Vinyl chloride	75-01-4	0.2	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	
TCPLP Semivolatile Organics, ug/L (ppb)																
Hexachlorobenzene	118-74-1	130	ND (<50)	ND (<49)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	
Hexachlorobutadiene	87-68-3	500	ND (<50)	ND (<49)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	
Hexachloroethane	67-72-1	3000	ND (<50)	ND (<49)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	
2,4-Dinitrotoluene	121-14-2	130	ND (<50)	ND (<49)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	
Nitrobenzene	98-95-3	2000	ND (<50)	ND (<49)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	
Pentachlorophenol	87-86-5	100000	ND (<250)	ND (<250)	ND (<250)	ND (<250)	ND (<250)	ND (<250)	ND (<250)	ND (<250)	ND (<250)	ND (<250)	ND (<250)	ND (<250)	ND (<250)	
2,4,5-Trichlorophenol	95-95-4	400000	ND (<50)	ND (<49)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	
2,4,6-Trichlorophenol	88-06-2	2000	ND (<50)	ND (<49)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	
TCPLP Pesticides, ug/L (ppb)																
Chlordane	57-74-9	30	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	
Endrin	72-20-8	20	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	
Heptachlor	76-44-8	8	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	
Heptachlor epoxide	1024-57-3	8	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	
Methoxychlor	72-43-5	10000	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	
Toxaphene	8001-35-2	500	ND (<10)	ND (<10)	ND (<9.8)	ND (<9.9)	ND (<9.9)	ND (<9.9)	ND (<9.9)	ND (<9.9)	ND (<9.9)	ND (<9.9)	ND (<9.9)	ND (<9.9)	ND (<10)	

TABLE 4. RESULTS SUMMARY (continued)

Analyte	CASRN	Regulated Level	320-1678-7	320-1678-8	320-1678-9	320-1678-10	320-1678-11	320-1678-12	320-1711-1
			UMC	UMC	UMC	UMC	UMC	UMC	MPB
			05-210-004	05-210-005	05-210-007	05-210-009	05-210-010	05-210-011	10-205-001
			5151302809-A	5151302810-A	5151302812-A	5151302814-A	5151302815-A	5151302816-A	4F61302803-A
Chemical Agent, ug/Kg (ppb)									
GB	107-44-8	16	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)
VX	50782-69-9	13	ND (<13)	ND (<13)	ND (<13)	ND (<13)	ND (<13)	ND (<13)	ND (<13)
HD	505-60-2	152	ND (<152)	ND (<152)	ND (<152)	ND (<152)	ND (<152)	ND (<152)	ND (<152)
TCLP Metals, mg/Kg (ppm)									
Arsenic	7440-38-2	5.0	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)
Barium	7440-39-3	100	1.2 J	1 J	0.77 J	0.94 J	0.49 J	1.4 J	1.1 J
Cadmium	7440-43-9	1.0	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)
Chromium	7440-47-3	5.0	0.033	0.039	0.028	0.027	0.055	0.028	0.059
Lead	7439-92-1	5.0	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)
Mercury	7439-97-6	0.2	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)
Selenium	7782-49-2	1.0	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	0.015 J
Silver	7440-22-4	5.0	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)
TCLP Volatile Organics, mg/L (ppm)									
Benzene	71-43-2	0.5	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
Carbon tetrachloride	56-23-5	0.5	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
Chlorobenzene	108-90-7	100.0	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
Chloroform	67-66-3	6.0	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
1,4-Dichlorobenzene	106-46-7	7.5	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
1,2-Dichloroethane	107-06-2	0.5	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
1,1-Dichloroethylene	75-35-4	0.7	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
Methyl ethyl ketone	78-93-3	200.0	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
(2-Butanone, MEK)	127-18-4	0.7	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
Tetrachloroethylene	79-01-6	0.5	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
Trichloroethylene	75-01-4	0.2	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
Vinyl chloride	118-74-1	130	ND (<49)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)
Hexachlorobenzene	87-68-3	500	ND (<49)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)
Hexachlorobutadiene	67-72-1	3000	ND (<49)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)
Hexachloroethane	121-14-2	130	ND (<49)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)
2,4-Dinitrotoluene	98-95-3	2000	ND (<49)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)
Nitrobenzene	87-86-5	100000	ND (<250)	ND (<250)	ND (<250)	ND (<250)	ND (<250)	ND (<250)	ND (<250)
Pentachlorophenol	95-95-4	400000	ND (<49)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<250)
2,4,5-Trichlorophenol	88-06-2	2000	ND (<49)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<250)
TCLP Semivolatile Organics, ug/L (ppb)									
Chlordane	57-74-9	30	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)
Endrin	72-20-8	20	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)
Heptachlor	76-44-8	8	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	0.017 J
Heptachlor epoxide	1024-57-3	8	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)
Methoxychlor	72-43-5	10000	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)
Toxaphene	8001-35-2	500	ND (<9.9)	ND (<10)	ND (<9.9)	ND (<9.9)	ND (<10)	ND (<10)	ND (<9.9)

TABLE 4. RESULTS SUMMARY (continued)

Analyte	CASRN	Regulated Level	320-2120-3			320-1711-2			320-2120-4			320-1711-3			320-2120-5			320-1711-4			320-2120-6		
			MPB			MPB			MPB			MPB			MPB			MPB			MPB		
			10-205-101			10-205-002			10-205-102			10-205-003			10-205-103			10-205-004			10-205-104		
			68B1308600-A	4F61302804-A	6611308600-A	4F61302804-A	6611308600-A	4F61302805-A	6621308600-A	4F61302806-A	6621308601-A												
Chemical Agent, ug/Kg (ppb)																							
GB	107-44-8	16	---	---	---	ND (<16)	---	---	---	---	ND (<16)	---	---	---	---	---	ND (<16)	---	---				
VX	50782-69-9	13	---	---	---	ND (<13)	---	---	---	---	ND (<13)	---	---	---	---	---	ND (<13)	---	---				
HD	505-60-2	152	---	---	---	ND (<152)	---	---	---	---	ND (<152)	---	---	---	---	---	ND (<152)	---	---				
TCLP Metals, mg/Kg (ppm)																							
Arsenic	7440-38-2	5.0	---	---	---	ND (<0.02)	---	---	---	---	ND (<0.02)	---	---	---	---	---	ND (<0.02)	---	---				
Barium	7440-39-3	100	---	---	---	0.63 J	---	---	---	---	0.5 J	---	---	---	---	---	0.77 J	---	---				
Cadmium	7440-43-9	1.0	---	---	---	ND (<0.01)	---	---	---	---	ND (<0.01)	---	---	---	---	---	ND (<0.01)	---	---				
Chromium	7440-47-3	5.0	---	---	---	0.043	---	---	---	---	0.049	---	---	---	---	---	0.057	---	---				
Lead	7439-92-1	5.0	---	---	---	ND (<0.01)	---	---	---	---	ND (<0.01)	---	---	---	---	---	ND (<0.01)	---	---				
Mercury	7439-97-6	0.2	---	---	---	ND (<0.002)	---	---	---	---	ND (<0.002)	---	---	---	---	---	ND (<0.002)	---	---				
Selenium	7782-49-2	1.0	---	---	---	ND (<0.02)	---	---	---	---	ND (<0.02)	---	---	---	---	---	ND (<0.02)	---	---				
Silver	7440-22-4	5.0	---	---	---	ND (<0.01)	---	---	---	---	ND (<0.01)	---	---	---	---	---	ND (<0.01)	---	---				
TCLP Volatile Organics, mg/L (ppm)																							
Benzene	71-43-2	0.5	---	---	---	ND (<0.2)	---	---	---	---	ND (<0.2)	---	---	---	---	---	ND (<0.2)	---	---				
Carbon tetrachloride	56-23-5	0.5	---	---	---	ND (<0.2)	---	---	---	---	ND (<0.2)	---	---	---	---	---	ND (<0.2)	---	---				
Chlorobenzene	108-90-7	100.0	---	---	---	ND (<0.2)	---	---	---	---	ND (<0.2)	---	---	---	---	---	ND (<0.2)	---	---				
Chloroform	67-66-3	6.0	---	---	---	ND (<0.2)	---	---	---	---	ND (<0.2)	---	---	---	---	---	ND (<0.2)	---	---				
1,4-Dichlorobenzene	106-46-7	7.5	---	---	---	ND (<0.2)	---	---	---	---	ND (<0.2)	---	---	---	---	---	ND (<0.2)	---	---				
1,2-Dichloroethane	107-06-2	0.5	---	---	---	ND (<0.2)	---	---	---	---	ND (<0.2)	---	---	---	---	---	ND (<0.2)	---	---				
1,1-Dichloroethylene (1,1-Dichloroethene)	75-35-4	0.7	---	---	---	ND (<0.2)	---	---	---	---	ND (<0.2)	---	---	---	---	---	ND (<0.2)	---	---				
Methyl ethyl ketone (2-Butanone, MEK)	78-93-3	200.0	---	---	---	ND (<0.2)	---	---	---	---	ND (<0.2)	---	---	---	---	---	ND (<0.2)	---	---				
Tetrachloroethylene (Tetrachloroethene)	127-18-4	0.7	---	---	---	ND (<0.2)	---	---	---	---	ND (<0.2)	---	---	---	---	---	ND (<0.2)	---	---				
Trichloroethylene (Trichloroethene)	79-01-6	0.5	---	---	---	ND (<0.2)	---	---	---	---	ND (<0.2)	---	---	---	---	---	ND (<0.2)	---	---				
Vinyl chloride	75-01-4	0.2	---	---	---	ND (<0.2)	---	---	---	---	ND (<0.2)	---	---	---	---	---	ND (<0.2)	---	---				
TCLP Semivolatile Organics, ug/L (ppb)																							
Hexachlorobenzene	118-74-1	130	---	---	---	ND (<10)	---	---	---	---	ND (<10)	---	---	---	---	---	ND (<10)	---	---				
Hexachlorobutadiene	87-68-3	500	---	---	---	ND (<10)	---	---	---	---	ND (<10)	---	---	---	---	---	ND (<10)	---	---				
Hexachloroethane	67-72-1	3000	---	---	---	ND (<50)	---	---	---	---	ND (<50)	---	---	---	---	---	ND (<50)	---	---				
2,4-Dinitrotoluene	121-14-2	130	---	---	---	ND (<50)	---	---	---	---	ND (<50)	---	---	---	---	---	ND (<50)	---	---				
Nitrobenzene	98-95-3	2000	---	---	---	ND (<100)	---	---	---	---	ND (<100)	---	---	---	---	---	ND (<100)	---	---				
Pentachlorophenol	87-86-5	100000	---	---	---	ND (<50)	---	---	---	---	ND (<50)	---	---	---	---	---	ND (<50)	---	---				
2,4,5-Trichlorophenol	95-95-4	400000	---	---	---	ND (<50)	---	---	---	---	ND (<50)	---	---	---	---	---	ND (<50)	---	---				
2,4,6-Trichlorophenol	88-06-2	2000	---	---	---	ND (<50)	---	---	---	---	ND (<50)	---	---	---	---	---	ND (<50)	---	---				
TCLP Pesticides, ug/L (ppb)																							
Chlordane	57-74-9	30	---	---	---	ND (<2.5)	---	---	---	---	ND (<2.5)	---	---	---	---	---	ND (<2.5)	---	---				
Endrin	72-20-8	20	---	---	---	ND (<0.5)	---	---	---	---	ND (<0.5)	---	---	---	---	---	ND (<0.5)	---	---				
Heptachlor	76-44-8	8	---	---	---	ND (<0.25)	---	---	---	---	ND (<0.25)	---	---	---	---	---	0.022 J	---	---				
Heptachlor epoxide	1024-57-3	8	---	---	---	ND (<0.25)	---	---	---	---	ND (<0.25)	---	---	---	---	---	0.02 J	---	---				
Methoxychlor	72-43-5	10000	---	---	---	ND (<2.5)	---	---	---	---	ND (<2.5)	---	---	---	---	---	ND (<2.5)	---	---				
Toxaphene	8001-35-2	500	---	---	---	ND (<10)	---	---	---	---	ND (<10)	---	---	---	---	---	ND (<10)	---	---				

TABLE 4. RESULTS SUMMARY (continued)

Analyte	CASRN	Regulated Level	320-1711-5		320-2120-7	320-1711-6		320-2120-8	320-1838-2	320-1838-3	320-1838-4
			MPB	MPB	MPB	MPB	LMC	BSA	BSA		
										10-205-005	10-205-105
			4F61302807-A	6621308603-A	4F61302808-A	6621308604-A	5151302836-A	5151302819-A	5151302821-A		
Chemical Agent, ug/Kg (ppb)											
GB	107-44-8	16	ND (<16)	---	ND (<16)	---	ND (<16)	ND (<16)	ND (<16)	ND (<16)	
VX	50782-69-9	13	ND (<13)	---	ND (<13)	---	ND (<13)	ND (<13)	ND (<13)	ND (<13)	
HD	505-60-2	152	ND (<152)	---	ND (<152)	---	ND (<152)	ND (<152)	ND (<152)	ND (<152)	
TCLP Metals, mg/Kg (ppm)											
Arsenic	7440-38-2	5.0	ND (<0.02)	---	ND (<0.02)	---	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	
Barium	7440-39-3	100	0.83 J	---	0.67 J	---	0.96 J	1.6 J	---	1 J	
Cadmium	7440-43-9	1.0	ND (<0.01)	---	ND (<0.01)	---	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	
Chromium	7440-47-3	5.0	0.051	---	0.055	---	0.027	0.025	0.038	---	
Lead	7439-92-1	5.0	ND (<0.01)	---	ND (<0.01)	---	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	
Mercury	7439-97-6	0.2	ND (<0.002)	---	ND (<0.002)	---	0.00033 J	ND (<0.002)	ND (<0.002)	ND (<0.002)	
Selenium	7782-49-2	1.0	ND (<0.02)	---	ND (<0.02)	---	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	
Silver	7440-22-4	5.0	ND (<0.01)	---	ND (<0.01)	---	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	
TCLP Volatile Organics, mg/L (ppm)											
Benzene	71-43-2	0.5	ND (<0.2)	---	ND (<0.2)	---	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	
Carbon tetrachloride	56-23-5	0.5	ND (<0.2)	---	ND (<0.2)	---	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	
Chlorobenzene	108-90-7	100.0	ND (<0.2)	---	ND (<0.2)	---	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	
Chloroform	67-66-3	6.0	ND (<0.2)	---	ND (<0.2)	---	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	
1,4-Dichlorobenzene	106-46-7	7.5	ND (<0.2)	---	ND (<0.2)	---	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	
1,2-Dichloroethane	107-06-2	0.5	ND (<0.2)	---	ND (<0.2)	---	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	
1,1-Dichloroethylene (1,1-Dichloroethene)	75-35-4	0.7	ND (<0.2)	---	ND (<0.2)	---	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	
Methyl ethyl ketone (2-Butanone, MEK)	78-93-3	200.0	ND (<0.2)	---	ND (<0.2)	---	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	
Tetrachloroethylene (Tetrachloroethene)	127-18-4	0.7	ND (<0.2)	---	ND (<0.2)	---	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	
Trichloroethylene (Trichloroethene)	79-01-6	0.5	ND (<0.2)	---	ND (<0.2)	---	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	
Vinyl chloride	75-01-4	0.2	ND (<0.2)	---	ND (<0.2)	---	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	
TCLP Semivolatile Organics, ug/L (ppb)											
Hexachlorobenzene	118-74-1	130	ND (<50)	ND (<10)	ND (<50)	ND (<10)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	
Hexachlorobutadiene	87-68-3	500	ND (<250)	ND (<10)	ND (<250)	ND (<10)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	
Hexachloroethane	67-72-1	3000	ND (<250)	ND (<50)	ND (<250)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	
2,4-Dinitrotoluene	121-14-2	130	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	
Nitrobenzene	98-95-3	2000	ND (<250)	ND (<100)	ND (<250)	ND (<100)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	
Pentachlorophenol	87-86-5	100000	ND (<1200)	ND (<50)	ND (<1200)	ND (<50)	ND (<250)	ND (<250)	ND (<250)	ND (<250)	
2,4,5-Trichlorophenol	95-95-4	400000	ND (<250)	ND (<50)	ND (<250)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	
2,4,6-Trichlorophenol	88-06-2	2000	ND (<250)	ND (<50)	ND (<250)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	
TCLP Pesticides, ug/L (ppb)											
Chlordane	57-74-9	30	ND (<2.5)	---	ND (<2.5)	---	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	
Endrin	72-20-8	20	0.087 J	---	ND (<0.5)	---	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	
Heptachlor	76-44-8	8	0.028 J	---	ND (<0.25)	---	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	
Heptachlor epoxide	1024-57-3	8	ND (<0.25)	---	ND (<0.25)	---	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	
Methoxychlor	72-43-5	10000	ND (<2.5)	---	ND (<2.5)	---	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	
Toxaphene	8001-35-2	500	ND (<9.9)	---	ND (<10)	---	ND (<10)	ND (<10)	ND (<10)	ND (<9.9)	

TABLE 4. RESULTS SUMMARY (continued)

Analyte	CASRN	Regulated Level	320-1838-5	320-1839-2	320-1839-3	320-1839-4	320-1839-5	320-1845-1	320-1845-2
			LMC	BSA	BSA	LMC	LMC	Airlock 111A	SDS
			05-153-003	17-146-003	17-146-004	05-153-004	05-153-001	06-164-001	21-140-001
			5151302837-A	5151302823-A	5151302824-A	5151302838-A	5151302835-A	5151302817-A	5151302825-A
Chemical Agent, ug/Kg (ppb)									
GB	107-44-8	16	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)
VX	50782-69-9	13	ND (<13)	ND (<13)	ND (<13)	ND (<13)	ND (<13)	ND (<13)	ND (<13)
HD	505-60-2	152	ND (<152)	ND (<152)	ND (<152)	ND (<152)	ND (<152)	ND (<152)	ND (<152)
TCPLP Metals, mg/Kg (ppm)									
Arsenic	7440-38-2	5.0	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)
Barium	7440-39-3	100	0.74 J	1.4 J	1.5 J	1.2 J	0.94 J	0.91 J	0.78 J
Cadmium	7440-43-9	1.0	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)
Chromium	7440-47-3	5.0	ND (<0.02)	0.038	0.044	0.023	0.039	0.059	0.059
Lead	7439-92-1	5.0	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)
Mercury	7439-97-6	0.2	ND (<0.002)	ND (<0.002)	ND (<0.002)	0.00032 J	0.00049 J	ND (<0.002)	ND (<0.002)
Selenium	7782-49-2	1.0	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)
Silver	7440-22-4	5.0	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)
TCPLP Volatile Organics, mg/L (ppm)									
Benzene	71-43-2	0.5	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
Carbon tetrachloride	56-23-5	0.5	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
Chlorobenzene	108-90-7	100.0	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
Chloroform	67-66-3	6.0	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
1,4-Dichlorobenzene	106-46-7	7.5	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
1,2-Dichloroethane	107-06-2	0.5	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
1,1-Dichloroethylene (1,1-Dichloroethene)	75-35-4	0.7	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
Methyl ethyl ketone (2-Butanone, MEK)	78-93-3	200.0	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
Tetrachloroethylene (Tetrachloroethene)	127-18-4	0.7	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
Trichloroethylene (Trichloroethene)	79-01-6	0.5	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
Vinyl chloride	75-01-4	0.2	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
TCPLP Semivolatile Organics, ug/L (ppb)									
Hexachlorobenzene	118-74-1	130	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<100)
Hexachlorobutadiene	87-68-3	500	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<500)
Hexachloroethane	67-72-1	3000	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<500)
2,4-Dinitrotoluene	121-14-2	130	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<100)
Nitrobenzene	98-95-3	2000	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<500)
Pentachlorophenol	87-86-5	100000	ND (<250)	ND (<250)	ND (<250)	ND (<250)	ND (<250)	ND (<250)	ND (<500)
2,4,5-Trichlorophenol	95-95-4	400000	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<500)
2,4,6-Trichlorophenol	88-06-2	2000	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<500)
TCPLP Pesticides, ug/L (ppb)									
Chlordane	57-74-9	30	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)
Endrin	72-20-8	20	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)
Heptachlor	76-44-8	8	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)
Heptachlor epoxide	1024-57-3	8	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)
Methoxychlor	72-43-5	10000	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)	ND (<2.5)
Toxaphene	8001-35-2	500	ND (<10)	ND (<9.9)	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<10)

TABLE 4. RESULTS SUMMARY (continued)

Analyte	CASRN	Regulated Level	320-2120-2 SDS	320-1845-3 SDS	320-1845-4 TOX	320-2120-1 TOX	320-1845-5 LIC Airlock	320-1845-6 LIC Primary	320-1845-7 LIC Primary
			21-140-101 6621308605-A	21-140-002 5151302826-A	11-141-001 5151302829-A	11-141-101 6621308606-A	13-154-001 5151302830-A	13-155-001 5151302831-A	13-155-002 5151302832-A
Chemical Agent, ug/Kg (ppb)									
GB	107-44-8	16	---	ND (<16)	ND (<16)	---	ND (<16)	ND (<16)	ND (<16)
VX	50782-69-9	13	---	ND (<13)	ND (<13)	---	ND (<13)	ND (<13)	ND (<13)
HD	505-60-2	152	---	ND (<152)	ND (<152)	---	ND (<152)	ND (<152)	ND (<152)
TCLP Metals, mg/Kg (ppm)									
Arsenic	7440-38-2	5.0	---	ND (<0.02)	ND (<0.02)	---	ND (<0.02)	ND (<0.02)	ND (<0.02)
Barium	7440-39-3	100	---	0.89 J	0.72 J	---	1 J	0.74 J	0.45 J
Cadmium	7440-43-9	1.0	---	ND (<0.01)	ND (<0.01)	---	ND (<0.01)	ND (<0.01)	ND (<0.01)
Chromium	7440-47-3	5.0	---	0.054	0.056	---	0.049	0.015 J	0.021
Lead	7439-92-1	5.0	---	ND (<0.01)	ND (<0.01)	---	ND (<0.01)	ND (<0.01)	ND (<0.01)
Mercury	7439-97-6	0.2	---	ND (<0.002)	ND (<0.002)	---	ND (<0.002)	ND (<0.002)	ND (<0.002)
Selenium	7782-49-2	1.0	---	ND (<0.02)	ND (<0.02)	---	ND (<0.02)	ND (<0.02)	ND (<0.02)
Silver	7440-22-4	5.0	---	ND (<0.01)	ND (<0.01)	---	ND (<0.01)	ND (<0.01)	ND (<0.01)
TCLP Volatile Organics, mg/L (ppm)									
Benzene	71-43-2	0.5	---	ND (<0.2)	ND (<0.2)	---	ND (<0.2)	ND (<0.2)	ND (<0.2)
Carbon tetrachloride	56-23-5	0.5	---	ND (<0.2)	ND (<0.2)	---	ND (<0.2)	ND (<0.2)	ND (<0.2)
Chlorobenzene	108-90-7	100.0	---	ND (<0.2)	ND (<0.2)	---	ND (<0.2)	ND (<0.2)	ND (<0.2)
Chloroform	67-66-3	6.0	---	ND (<0.2)	ND (<0.2)	---	ND (<0.2)	ND (<0.2)	ND (<0.2)
1,4-Dichlorobenzene	106-46-7	7.5	---	ND (<0.2)	ND (<0.2)	---	ND (<0.2)	ND (<0.2)	ND (<0.2)
1,2-Dichloroethane	107-06-2	0.5	---	ND (<0.2)	ND (<0.2)	---	ND (<0.2)	ND (<0.2)	ND (<0.2)
1,1-Dichloroethylene (1,1-Dichloroethene)	75-35-4	0.7	---	ND (<0.2)	ND (<0.2)	---	ND (<0.2)	ND (<0.2)	ND (<0.2)
Methyl ethyl ketone (2-Butanone, MEK)	78-93-3	200.0	---	ND (<0.2)	ND (<0.2)	---	ND (<0.2)	ND (<0.2)	ND (<0.2)
Tetrahydroethylene (Tetrahydroethene)	127-18-4	0.7	---	ND (<0.2)	ND (<0.2)	---	ND (<0.2)	ND (<0.2)	ND (<0.2)
Trichloroethylene (Trichloroethene)	79-01-6	0.5	---	ND (<0.2)	ND (<0.2)	---	ND (<0.2)	ND (<0.2)	ND (<0.2)
Vinyl chloride	75-01-4	0.2	---	ND (<0.2)	ND (<0.2)	---	ND (<0.2)	ND (<0.2)	ND (<0.2)
TCLP Semivolatile Organics, ug/L (ppb)									
Hexachlorobenzene	118-74-1	130	ND (<10)	ND (<50)	ND (<100)	ND (<10)	ND (<50)	ND (<50)	ND (<50)
Hexachlorobutadiene	87-68-3	500	ND (<10)	ND (<50)	ND (<500)	ND (<10)	ND (<50)	ND (<50)	ND (<50)
Hexachloroethane	67-72-1	3000	ND (<50)	ND (<50)	ND (<500)	ND (<50)	ND (<50)	ND (<50)	ND (<50)
2,4-Dinitrotoluene	121-14-2	130	ND (<50)	ND (<50)	ND (<100)	ND (<50)	ND (<50)	ND (<50)	ND (<50)
Nitrobenzene	98-95-3	2000	ND (<100)	ND (<50)	ND (<500)	ND (<100)	ND (<50)	ND (<50)	ND (<50)
Pentachlorophenol	87-86-5	100000	ND (<50)	ND (<50)	ND (<2500)	ND (<50)	ND (<250)	ND (<250)	ND (<250)
2,4,5-Trichlorophenol	95-95-4	400000	ND (<50)	ND (<50)	ND (<500)	ND (<50)	ND (<50)	ND (<50)	ND (<50)
2,4,6-Trichlorophenol	88-06-2	2000	ND (<50)	ND (<50)	ND (<500)	ND (<50)	ND (<50)	ND (<50)	ND (<50)
TCLP Pesticides, ug/L (ppb)									
Chlordane	57-74-9	30	---	ND (<2.5)	ND (<2.5)	---	ND (<2.5)	ND (<2.5)	ND (<2.5)
Endrin	72-20-8	20	---	ND (<0.5)	ND (<0.5)	---	ND (<0.5)	ND (<0.5)	ND (<0.49)
Heptachlor	76-44-8	8	---	ND (<0.25)	ND (<0.25)	---	ND (<0.25)	ND (<0.25)	ND (<0.25)
Heptachlor epoxide	1024-57-3	8	---	ND (<0.25)	ND (<0.25)	---	ND (<0.25)	ND (<0.25)	ND (<0.25)
Methoxychlor	72-43-5	10000	---	ND (<2.5)	0.03 J	---	ND (<2.5)	ND (<2.5)	ND (<2.5)
Toxaphene	8001-35-2	500	---	ND (<9.9)	ND (<9.9)	---	ND (<10)	ND (<10)	ND (<9.9)

TABLE 4. RESULTS SUMMARY (continued)

Analyte	CASRN	Regulated Level	Chemical Agent, ug/Kg (ppb)						TCLP Metals, mg/Kg (ppm)					
			320-1845-8 LIC2 Primary	320-1845-9 LIC2 Primary	320-1873-1 Airlock 123A	320-1873-2 TMA	320-1873-3 TMA	320-1873-4 TMA Decon						
GB	107-44-8	16	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)
VX	50782-69-9	13	ND (<13)	ND (<13)	ND (<13)	ND (<13)	ND (<13)	ND (<13)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)
HD	505-60-2	152	ND (<152)	ND (<152)	ND (<152)	ND (<152)	ND (<152)	ND (<152)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)
TCLP Volatile Organics, mg/L (ppm)														
Arsenic	7440-38-2	5.0	ND (<0.02)	ND (<0.02)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)
Barium	7440-39-3	100	1 J	0.53 J	0.52	0.48	0.61	0.64	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)
Cadmium	7440-43-9	1.0	ND (<0.01)	ND (<0.01)	0.0022 J	0.07	0.066	0.041	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)
Chromium	7440-47-3	5.0	0.02	0.027	0.024	0.07	0.066	0.041	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)
Lead	7439-92-1	5.0	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)
Mercury	7439-97-6	0.2	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)
Selenium	7782-49-2	1.0	ND (<0.02)	ND (<0.02)	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.05)
Silver	7440-22-4	5.0	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)
TCLP Volatile Organics, mg/L (ppm)														
Benzene	71-43-2	0.5	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
Carbon tetrachloride	56-23-5	0.5	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
Chlorobenzene	108-90-7	100.0	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
Chloroform	67-66-3	6.0	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
1,4-Dichlorobenzene	106-46-7	7.5	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
1,2-Dichloroethane	107-06-2	0.5	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
1,1-Dichloroethylene (1,1-Dichloroethene)	75-35-4	0.7	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
Methyl ethyl ketone (2-Butanone, MEK)	78-93-3	200.0	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
Tetrachloroethylene (Tetrachloroethene)	127-18-4	0.7	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
Trichloroethylene (Trichloroethene)	79-01-6	0.5	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
Vinyl chloride	75-01-4	0.2	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
TCLP Semivolatile Organics, ug/L (ppb)														
Hexachlorobenzene	118-74-1	130	ND (<50)	ND (<50)	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)
Hexachlorobutadiene	87-68-3	500	ND (<50)	ND (<50)	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)
Hexachloroethane	67-72-1	3000	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)
2,4-Dinitrotoluene	121-14-2	130	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)
Nitrobenzene	98-95-3	2000	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)
Pentachlorophenol	87-86-5	100000	ND (<250)	ND (<250)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)
2,4,5-Trichlorophenol	95-95-4	400000	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)
2,4,6-Trichlorophenol	88-06-2	2000	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)
TCLP Pesticides, ug/L (ppb)														
Chlordane	57-74-9	30	ND (<2.5)	ND (<2.5)	ND (<5)	ND (<5)	ND (<5)	ND (<5)	ND (<5)	ND (<5)	ND (<5)	ND (<5)	ND (<5)	ND (<5)
Endrin	72-20-8	20	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)
Heptachlor	76-44-8	8	0.05 J	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)
Heptachlor epoxide	1024-57-3	8	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)	ND (<0.25)
Methoxychlor	72-43-5	10000	ND (<2.5)	ND (<2.5)	ND (<1)	ND (<1)	ND (<1)	ND (<1)	ND (<1)	ND (<1)	ND (<1)	ND (<1)	ND (<1)	ND (<1)
Toxaphene	8001-35-2	500	ND (<10)	ND (<9.9)	ND (<20)	ND (<20)	ND (<20)	ND (<20)	ND (<20)	ND (<20)	ND (<20)	ND (<20)	ND (<20)	ND (<20)

TABLE 4. RESULTS SUMMARY (continued)

Notes:

1. A "ND" indicates the analyte was not detected. For each "ND" the laboratory's reporting limit, adjusted for dilution as required, is provided parenthetically. The laboratory reporting limit is at, or below, the regulatory limit.
2. A "J" indicates the analyte was detected below the laboratory reporting limit. Such results are estimated quantities. The preceding numerical value is the approximate concentration of the analyte in the sample.
3. For the TCLP semivolatile organics, the six samples from the MDB, one sample from the TOX, and one of two samples from the SDS exhibited poor recovery for one or more surrogates with the undiluted and/or lesser diluted analysis or were not able to be analyzed without dilution due to matrix effects. These sample locations were re-sampled and analyzed for TCLP semivolatile organics. Results for the re-sampled locations are reported in addition to the results of the original sample. In all instances, results for these samples are below the regulated level for each of the TCLP semivolatile organics identified in the WAP.

Abbreviations:

<	less than	ND	not detected
CASRN	Chemical Abstracts Service Registry Numbers	ppb	parts per billion
GB	Sarin or Isopropyl Methylphosphonofluoridate	ppm	parts per million
HD	Bis (2-chloroethyl) Sulfide	TCLP	Toxicity Characteristic Leaching Procedure
J	estimated value that is less than the reporting limit	ug/Kg	microgram(s) per kilogram
mg/Kg	milligram(s) per kilogram	ug/L	microgram(s) per liter
mg/L	milligram(s) per liter	VX	O-Ethyl S-(2-Diisopropylaminoethyl) Methylphosphonothiolate

DATA ASSESSMENT REPORT

UMCDF MDB CONCRETE CHIP SAMPLING

INTRODUCTION

This data assessment report has been prepared to present the results of the Stage 1 validation of the non-agent samples and analytes summarized below. All samples in these sample delivery groups (SDGs) were manually validated and should have the following label applied:

Stage_1_Validation_Manual (S1VM)

Laboratory(s): TestAmerica – West Sacramento, CA and Pittsburgh, PA

Sample Date	Sample Type	TestAmerica SDG	TestAmerica Sample Number	UMCDF Laboratory Sample ID	UMCDF Container ID	TCLP VOCs	TCLP SVOCs	TCLP Pesticides	TCLP Metals	TCLP Mercury
01/29/2013	Solid	320-1635-1	320-1635-1	4F61302800-A	03-211-001	X	X	X	X	X
01/29/2013	Solid	320-1635-1	320-1635-2	5151302811-A	05-210-006	X	X	X	X	X
01/29/2013	Solid	320-1635-1	320-1635-3	5151302813-A	05-210-008	X	X	X	X	X
01/29/2013	Solid	320-1650-1	320-1650-1	5151302802-A	04-213-001	X	X	X	X	X
01/29/2013	Solid	320-1650-1	320-1650-2	5151302803-A	04-213-002	X	X	X	X	X
01/29/2013	Solid	320-1650-1	320-1650-3	5151302804-A	04-213-003	X	X	X	X	X
01/29/2013	Solid	320-1650-1	320-1650-4	5151302805-A	04-213-004	X	X	X	X	X
01/29/2013	Solid	320-1650-1	320-1650-5	4F61302801-A	03-212-001	X	X	X	X	X
01/29/2013	Solid	320-1650-1	320-1650-6	4F61302802-A	03-212-002	X	X	X	X	X
01/31/2013	Solid	320-1678-1	320-1678-2	5151302800-A	06-221-001	X	X	X	X	X
01/31/2013	Solid	320-1678-1	320-1678-3	5151302801-A	06-217-001	X	X	X	X	X
01/30/2013	Solid	320-1678-1	320-1678-4	5151302806-A	05-210-001	X	X	X	X	X
01/30/2013	Solid	320-1678-1	320-1678-5	5151302807-A	05-210-002	X	X	X	X	X
01/30/2013	Solid	320-1678-1	320-1678-6	5151302808-A	05-210-003	X	X	X	X	X
01/30/2013	Solid	320-1678-1	320-1678-7	5151302809-A	05-210-004	X	X	X	X	X
01/30/2013	Solid	320-1678-1	320-1678-8	5151302810-A	05-210-005	X	X	X	X	X
01/30/2013	Solid	320-1678-1	320-1678-9	5151302812-A	05-210-007	X	X	X	X	X
01/30/2013	Solid	320-1678-1	320-1678-10	5151302814-A	05-210-009	X	X	X	X	X
01/30/2013	Solid	320-1678-1	320-1678-11	5151302815-A	05-210-010	X	X	X	X	X
01/30/2013	Solid	320-1678-1	320-1678-12	5151302816-A	05-210-011	X	X	X	X	X
02/04/2013	Solid	320-1711-1	320-1711-1	4F61302803-A	10-205-001	X	X	X	X	X
02/04/2013	Solid	320-1711-1	320-1711-2	4F61302804-A	10-205-002	X	X	X	X	X
02/04/2013	Solid	320-1711-1	320-1711-3	4F61302805-A	10-205-003	X	X	X	X	X
02/04/2013	Solid	320-1711-1	320-1711-4	4F61302806-A	10-205-004	X	X	X	X	X
02/04/2013	Solid	320-1711-1	320-1711-5	4F61302807-A	10-205-005	X	X	X	X	X
02/04/2013	Solid	320-1711-1	320-1711-6	4F61302808-A	10-205-006	X	X	X	X	X
02/18/2013	Solid	320-1838-1	320-1838-2	5151302836-A	05-153-002	X	X	X	X	X
02/18/2013	Solid	320-1838-1	320-1838-3	5151302819-A	17-146-001	X	X	X	X	X
02/18/2013	Solid	320-1838-1	320-1838-4	5151302821-A	17-146-002	X	X	X	X	X
02/18/2013	Solid	320-1838-1	320-1838-5	5151302837-A	05-153-003	X	X	X	X	X
02/18/2013	Solid	320-1839-1	320-1839-2	5151302823-A	17-146-003	X	X	X	X	X
02/18/2013	Solid	320-1839-1	320-1839-3	5151302824-A	17-146-004	X	X	X	X	X
02/18/2013	Solid	320-1839-1	320-1839-4	5151302838-A	05-153-004	X	X	X	X	X
02/18/2013	Solid	320-1839-1	320-1839-5	5151302835-A	05-153-001	X	X	X	X	X
02/19/2013	Solid	320-1845-1	320-1845-1	5151302817-A	06-164-001	X	X	X	X	X
02/19/2013	Solid	320-1845-1	320-1845-2	5151302825-A	21-140-001	X	X	X	X	X
02/19/2013	Solid	320-1845-1	320-1845-3	5151302826-A	21-140-002	X	X	X	X	X
02/19/2013	Solid	320-1845-1	320-1845-4	5151302829-A	11-141-001	X	X	X	X	X
02/19/2013	Solid	320-1845-1	320-1845-5	5151302830-A	13-154-001	X	X	X	X	X

Sample Date	Sample Type	TestAmerica SDG	TestAmerica Sample Number	UMCDF Laboratory Sample ID	UMCDF Container ID	TCLP VOCs	TCLP SVOCs	TCLP Pesticides	TCLP Metals	TCLP Mercury
02/19/2013	Solid	320-1845-1	320-1845-6	5151302831-A	13-155-001	X	X	X	X	X
02/19/2013	Solid	320-1845-1	320-1845-7	5151302832-A	13-155-002	X	X	X	X	X
02/19/2013	Solid	320-1845-1	320-1845-8	5151302833-A	13-158-001	X	X	X	X	X
02/19/2013	Solid	320-1845-1	320-1845-9	5151302834-A	13-158-002	X	X	X	X	X
02/21/2013	Solid	320-1873-1	320-1873-1	5151302818-A	06-169-001	X	X	X	X	X
02/21/2013	Solid	320-1873-1	320-1873-2	5151302827-A	12-120-001	X	X	X	X	X
02/21/2013	Solid	320-1873-1	320-1873-3	5151302828-A	12-120-002	X	X	X	X	X
02/21/2013	Solid	320-1873-1	320-1873-4	5151302839-A	12-118-001	X	X	X	X	X
03/27/2013	Solid	320-2120-1	320-2120-1	6621308606-A	11-141-101		X			
03/27/2013	Solid	320-2120-1	320-2120-2	6621308605-A	21-140-101		X			
03/28/2013	Solid	320-2120-1	320-2120-3	68B1308600-A	10-205-101		X			
03/28/2013	Solid	320-2120-1	320-2120-4	6611308600-A	10-205-102		X			
03/28/2013	Solid	320-2120-1	320-2120-5	6621308600-A	10-205-103		X			
03/28/2013	Solid	320-2120-1	320-2120-6	6621308601-A	10-205-104		X			
03/28/2013	Solid	320-2120-1	320-2120-7	6621308603-A	10-205-105		X			
03/28/2013	Solid	320-2120-1	320-2120-8	6621308604-A	10-205-106		X			

I. STAGE 1 VALIDATION

Each laboratory analytical data package was subjected to a Stage 1 validation as described in the "Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use" (EPA 2009). Stage 1 validation consists of verification and validation checks for the compliance of sample receipt conditions, sample characteristics, and analytical results. The following baseline checks were performed on each laboratory analytical data package:

- Documentation identifies the laboratory receiving and conducting analyses, and includes documentation for all samples submitted for analyses.
- Requested analytical methods were performed and the analysis dates are present.
- Requested target analyte results are reported along with the original laboratory data qualifiers and data qualifier definitions for each reported result.
- Requested target analyte result units are reported.
- Requested reporting limits for all samples are present and results at and below the requested reporting limits are clearly identified.
- Sampling dates and times, date and time of laboratory receipt of samples, and sample conditions upon receipt at the laboratory are documented.

The laboratory provided eight (8) Level 2 analytical reports that include the forty-seven (47) solid (concrete) samples collected on 01/29/2013, 01/30/2013, 01/31/2013, 02/04/2013, 02/18/2013, 02/19/2013, and 02/21/2013. An additional laboratory report was provided that includes the eight (8) resampled locations collected on 03/27/2013 and 03/28/2013. Several laboratory reports included samples submitted by the UMCDF that are not part of the MDB concrete sampling. These laboratory reports and the unassociated samples are listed below:

TestAmerica Job ID	TestAmerica Sample Number	Laboratory Sample Number
320-1678-1	320-1678-1	5311302900-A
320-1838-1	320-1838-1	C421304500-A
320-1839-1	320-1839-1	C421304501-A
320-2120-1	320-2120-9	6A71308700-A

Each Level 2 analytical report includes a Lab Chronicle that identifies the laboratories receiving and conducting analyses as TestAmerica – West Sacramento, CA (TCLP semivolatiles, TCLP pesticides, and TCLP metals, including mercury) and TestAmerica – Pittsburgh, PA (TCLP volatiles, TCLP semivolatiles, TCLP pesticides, and TCLP metals, including mercury). In addition, each laboratory report includes a Certification Summary that identifies the various certifications held by each laboratory, a Method Summary identifying which laboratory performed each method, copies of the chain-of-custody (COC) forms for samples received at each laboratory, and Login Sample Receipt Checklists to document sample receipt for each laboratory.

Requested analytical methods, as required by the UMCDF Hazardous Waste Permit, Attachment 2, Umatilla Chemical Agent Disposal Facility Waste Analysis Plan, January 2013 (DEQ 2013) and identified on the COC forms, were performed and reported on Client Sample Results forms along with the analysis dates. In addition, the sample preparation and analysis dates are provided on the Lab Chronicle.

The COC forms indicate analysis type (e.g., TCLP Volatiles) and do not specify individual target analytes (e.g., benzene or chlordane). The validator referred to the WAP and verified the analytes reported on the Client Sample Results forms include all required analytes identified in the WAP. It is noted that the laboratory has reported additional analytes for each sample that are not specified in the WAP. Table A provides a listing of the analytes reported by the laboratory for each sample and an indication if it is required by the WAP. The reported results for each analyte include the original laboratory data qualifiers. Each laboratory report provides laboratory qualifier definitions used for each analysis type.

For each reported analyte, the result units are reported on the Client Sample Results forms.

Required reporting limits are not specified on the COC or in the WAP. However, the validator ascertained that the intended use of the data was to demonstrate the waste was not characteristic for toxicity for the WAP-specific analytes listed in 40 CFR Part 261.24, Table 1 "Maximum Concentration of Contaminates for the Toxicity Characteristic." The laboratory reporting limits for all samples are present and results at and below the laboratory reporting limits are clearly identified. In some instances, dilutions were performed and the dilution-adjusted reporting limits are greater than the regulatory limit. The laboratory has also reported results for all such analytes where the undiluted, or lesser-diluted, analysis provides a reporting limit that is below the regulatory limit.

The date and time each sample was collected, date and time of laboratory receipt of samples, and sample conditions upon receipt at the laboratory are documented in each laboratory report.

II. PRELIMINARY ASSESSMENT

During the Stage 1 validation, the validator observed that not all quality control results were within control limits. In general, the observed failures are not expected to result in the rejection of the results. Typically, such results will yield a "use with caution" or no qualification in accordance with the site procedure, "Off-Site Waste Data Quality Reviews" (URS 2012). There are some instances where the quality control results are expected to yield unusable results as discussed below. This preliminary assessment is intended to provide the data user with a general indication if any results are likely to be rejected or deemed unusable. It is expected that each laboratory analytical data package will be subjected to a Stage 2A validation in accordance with the site procedure. The Stage 2A validation will assess the data usability and apply data qualifiers, where appropriate.

The preliminary assessment included the following items and conclusions listed below:

- Sample receipt
- Sample preservation
- Holding times
- Method blank
- Laboratory control sample (LCS) percent recovery
- Matrix spike (MS)/Matrix spike duplicate (MSD) percent recovery and relative percent difference (RPD)
- Surrogate percent recovery

Sample Receipt

No unresolvable sample receipt issues were reported by the laboratory. It is not expected that any of the reported results will be rejected or otherwise deemed unusable based on sample receipt conditions.

Sample Preservation

All samples were reported to have been received within the acceptable range for sample temperature upon receipt. No other preservation was required for these samples. It is not expected that any of the reported results will be rejected or otherwise deemed unusable based on sample preservation conditions.

Holding Times

For non-volatile TCLP parameters, holding times from sample collection to TCLP leaching, TCLP leaching to sample preparation, and sample preparation to analysis are evaluated. For TCLP volatiles, holding times from sample collection to leaching and leaching to analysis are evaluated. All samples were originally leached, prepared, as required, and analyzed within applicable holding times. Several samples were re-extracted for TCLP pesticides to confirm low surrogate recovery for the original analysis. The TCLP pesticides re-extractions for certain samples were performed beyond the seven (7) day holding time. Both the original results and re-extracted results are reported with the re-extractions having an "RE" suffix. It is not expected that any of the reported results will be rejected or otherwise deemed unusable based on holding times.

Method Blank

The laboratory prepared and reported method blanks (blanks associated with the sample preparation) and leachate blanks (blanks associated with the TCLP leaching process). While there were target analytes detected in both method blanks and leachate blanks, no gross contamination was observed and all but one of the detections were below the reporting limit. It is not expected that any of the reported results will be rejected or otherwise deemed unusable based on method blank or leachate blank results.

LCS Percent Recovery

There were instances where LCS percent recoveries were not within acceptance limits. In most instances, the LCS recoveries were above the upper acceptance limit. In a few instances, the LCS recoveries were below the lower acceptance limit but based on other quality control indicators the laboratory determined that corrective action was not indicated. In no instance was a recovery less than 10% observed. It is not expected that any of the reported results will be rejected or otherwise deemed unusable based on LCS percent recoveries.

MS/MSD Percent Recovery and RPD

There were instances where MS/MSD percent recoveries were not within acceptance limits. In several instances, percent recoveries less than 10% were observed. In such instances, it can be expected that the associated results for the failing analyte will be rejected or otherwise deemed unusable. It is not expected that any of the reported results will be rejected or otherwise deemed unusable based on RPD results. MS/MSDs with individual analyte recoveries less than 10% are listed below.

TestAmerica Sample ID	Associated TestAmerica Job IDs	Analyte	Recovery	Acceptance Limits
320-1635-1 MS	320-1635-1, 320-1650-1, 320-1678-1	3,3'-Dichlorobenzidine	0%	32 – 92%
320-1635-1 MSD	320-1635-1, 320-1650-1, 320-1678-1	3,3'-Dichlorobenzidine	6%	32 – 92%
320-1711-1 MS	320-1711-1	3,3'-Dichlorobenzidine	0%	32 – 92%
320-1711-1 MSD	320-1711-1	3,3'-Dichlorobenzidine	0%	32 – 92%
320-1839-1 MS	320-1839-1, 320-1838-1	3,3'-Dichlorobenzidine	0%	32 – 92%
320-1839-1 MS	320-1839-1, 320-1838-1	4-Nitrophenol	0%	24 – 64%
320-1839-1 MSD	320-1839-1, 320-1838-1	3,3'-Dichlorobenzidine	1%	32 – 92%
320-1839-1 MSD	320-1839-1, 320-1838-1	4-Nitrophenol	6%	24 – 64%

Surrogate Percent Recovery

There were instances where surrogate percent recoveries were not within acceptance limits. In some, but not all instances, samples were re-extracted to confirm low surrogate recoveries. In one instance, the calculated recovery is less than 10% (see below). For this sample, the extract was diluted prior to analysis and this may have resulted in the surrogate being diluted out of the extract. In instances where necessary dilutions result in one or more surrogates being diluted out of the extract, results may be deemed usable even when the calculated recovery is less than the lower acceptance limit.

TestAmerica Sample ID	Surrogate	Recovery	Acceptance Limits
320-1711-6-DL	Phenol-d6	0%	10 – 50%

The resampled locations provide usable TCLP semivolatile organic results without dilution and with all surrogate recoveries within acceptance limits.

III. OVERALL ASSESSMENT

The Stage 1 validation did not identify any deficiencies. The preliminary assessment indicates all WAP-required results, except as noted previously, are expected to be considered usable.

IV. REFERENCES

- EPA 2009 Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use, U.S. Environmental Protection Agency Office of Solid Waste and Emergency Response, January 13, 2009.
- URS 2012 UM-LA-038, Off-Site Waste Data Quality Reviews, Change 1, February 20, 2012.
- DEQ 2013 Umatilla Chemical Agent Disposal Facility, Permit No. ORQ 000 009 431-1, Attachment 2, Umatilla Chemical Agent Disposal Facility Waste Analysis Plan, January 17, 2013.

TABLE A. REPORTED ANALYTE LIST

Analyte	WAP	Analyte	WAP	Analyte	WAP
TCLP VOA		TCLP SVOA (continued)		TCLP SVOA (continued)	
1,1-Dichloroethene	Yes	2,6-Dinitrotoluene		Nitrobenzene	Yes
1,2-Dichloroethane	Yes	2-Chloronaphthalene		N-Nitrosodi-n-propylamine	
2-Butanone (MEK)	Yes	2-Chlorophenol		N-Nitrosodiphenylamine	
Benzene	Yes	2-Methylnaphthalene		Pentachlorophenol	Yes
Carbon tetrachloride	Yes	2-Methylphenol		Phenanthrene	
Chlorobenzene	Yes	2-Nitroaniline		Phenol	
Chloroform	Yes	2-Nitrophenol		Pyrene	
Chloromethane		3-Methylphenol & 4-		TCLP Pesticides	
Tetrachloroethene	Yes	3,3'-Dichlorobenzidine		Aldrin	
Trichloroethene	Yes	3-Nitroaniline		alpha-BHC	
Bromomethane		4,6-Dinitro-2-methylphenol		beta-BHC	
Vinyl chloride	Yes	4-Bromophenyl phenyl ether		gamma-BHC (Lindane)	
Chloroethane		4-Chloro-3-methylphenol		delta-BHC	
Trichlorofluoromethane		4-Chloroaniline		Chlordane (technical)	Yes
Dichlorodifluoromethane		4-Chlorophenyl phenyl ether		4,4'-DDD	
Acetone		4-Nitroaniline		4,4'-DDE	
Carbon disulfide		4-Nitrophenol		4,4'-DDT	
Methylene Chloride		Acenaphthene		Dieldrin	
trans-1,2-Dichloroethene		Acenaphthylene		Endosulfan I	
Methyl tert-butyl ether		Acetophenone		Endosulfan II	
1,1-Dichloroethane		Anthracene		Endosulfan sulfate	
cis-1,2-Dichloroethene		Benzaldehyde		Endrin	Yes
1,1,1-Trichloroethane		Benzo[a]anthracene		Endrin aldehyde	
1,2-Dichloropropane		Benzo[a]pyrene		Endrin ketone	
Dibromomethane		Benzo[b]fluoranthene		Heptachlor	Yes
Dichlorobromomethane		Benzo[g,h,i]perylene		Heptachlor epoxide	Yes
cis-1,3-Dichloropropene		Benzo[k]fluoranthene		Methoxychlor	Yes
4-Methyl-2-pentanone (MIBK)		Biphenyl		Toxaphene	Yes
Toluene		bis (2-chloroisopropyl) ether		TCLP Metals	
trans-1,3-Dichloropropene		Bis(2-chloroethoxy)methane		Silver	Yes
1,1,2-Trichloroethane		Bis(2-chloroethyl)ether		Antimony	
2-Hexanone		Bis(2-ethylhexyl) phthalate		Arsenic	Yes
Chlorodibromomethane		Butyl benzyl phthalate		Barium	Yes
1,2-Dibromoethane		Carbazole		Beryllium	
Ethylbenzene		Chrysene		Boron	
Xylenes, Total		Dibenz(a,h)anthracene		Cadmium	Yes
Styrene		Dibenzofuran		Chromium	Yes
Bromoform		Diethyl phthalate		Cobalt	
1,1,2,2-Tetrachloroethane		Dimethyl phthalate		Copper	
1,3-Dichlorobenzene		Di-n-butyl phthalate		Lead	Yes
1,4-Dichlorobenzene	Yes	Di-n-octyl phthalate		Manganese	
1,2-Dichlorobenzene		Fluoranthene		Nickel	
1,2-Dibromo-3-Chloropropane		Fluorene		Phosphorus	
TCLP SVOA		Hexachlorobenzene	Yes	Selenium	Yes
2,4,5-Trichlorophenol	Yes	Hexachlorobutadiene	Yes	Thallium	
2,4,6-Trichlorophenol	Yes	Hexachlorocyclopentadiene		Tin	
2,4-Dichlorophenol		Hexachloroethane	Yes	Vanadium	
2,4-Dimethylphenol		Indeno[1,2,3-cd]pyrene		Zinc	
2,4-Dinitrophenol		Isophorone		Mercury	Yes
2,4-Dinitrotoluene	Yes	Naphthalene			

Addendum to Environmental Quality Commission staff report

DEQ would like to amend the recommendation to EQC to allow the temporary rule to be effective upon filing with the Secretary of State and to remove the language “July 31, 2013, through Jan. 31, 2014”. The Umatilla Chemical Demilitarization Facility estimates it will take roughly the six months that this temporary rule is effective to complete the demolition work. The amendment to the recommendation provides flexibility on the start date for the rule so that it will not become effective before it is required to be in place for purposes of starting demolition.

Temporary Rule Amendments for Umatilla Chemical Demilitarization Facility



State of Oregon
Department of
Environmental
Quality

Proposal to the Oregon Environmental Quality Commission: Adopt temporary rules to modify when the hazardous waste “F” listing applies to demilitarization residue that is determined to be free of blister and nerve agents.

Background

DEQ proposes a temporary rulemaking to modify when the hazardous waste “F” listing applies to demilitarization residue generated at the Umatilla Chemical Demilitarization Facility. The modification would only apply to wastes that are free of blister and nerve agents, in accordance with the facility permit.

Why are the rule changes needed?

In 2000, EQC adopted rules related to the appropriate hazardous waste listing for chemical agents and residues from demilitarization, treatment and testing of chemical agents. The hazardous waste listing rule, which applies only in Oregon, ensured that these wastes would be considered a hazardous waste regardless of whether they actually contained chemical agent or exhibited any hazardous waste characteristics. Since the time this rule went into place, scientific data has been developed that establishes safe levels of chemical agent.

The facility has conducted analytical testing of the structure to be demolished and DEQ has determined that these tests illustrate that the building and its components meet the permit’s definition of being “agent free.”

Adoption of this temporary rule would allow agent-free and non-hazardous demolition debris from the facility to be dealt with as solid waste prior to being placed in a container for removal.

What is the objective of this rulemaking?

Adoption of these temporary rules would allow the facility to manage the demolition debris as a solid, not

hazardous, waste, which would increase program efficiency and reduce project costs without an increase in risk to human health or the environment.

The proposed temporary rule changes would allow the facility to demolish and breakdown a building into smaller pieces, and reuse some of it to create ramps for easier access to the building for continued demolition. Per the facility’s permit, the building must be demolished. The proposed temporary change in rule would only apply from the time the demolition occurs, creating the “waste,” to the placement of the materials in containers. Once the waste is in a container it will be considered F-listed hazardous waste and must be transported and disposed of at a hazardous waste-permitted treatment, storage and disposal facility.

Who may be affected?

The schedule and cost of closing the facility would be affected if the rules are not amended. This would affect both the permittee and the public by drastically increasing costs and slowing down closure.

How was this proposal developed?

This rule was proposed after DEQ received information from the Umatilla facility on the testing done inside the building that is slated for demolition. That testing showed that the building and its components meet the definition of “agent free” under the facility permit.

Copies of the documents relied upon in the development of this proposal can be reviewed online and will be posted with the June 19, 2013, EQC report after June 1:
www.oregon.gov/deq/EQC/Pages/EQCMeetings.aspx

**Eastern Region
Solid and Hazardous
Waste Programs**
400 East Scenic Drive
The Dalles, Oregon 97058
Phone: 541-298-7255
800-452-4011

Contact: Lissa Druback,
Manager
Phone: 541-298-7255 ext. 222
Email:
Druback.Lissa@deq.state.or.us
www.oregon.gov/DEQ/

DEQ and EQC have the
statutory authority to
address this issue under
[ORS 466.020](http://ORS.466.020).

Who to contact if you have questions about this temporary rulemaking

If you have any questions about this rulemaking please contact:

Lissa Druback, Eastern Region Manager
Solid and Hazardous Waste Programs
400 East Scenic Drive, Room 307
The Dalles, OR 97058
541-298-7255 ext. 222

Or by email at: Druback.Lissa@deq.state.or.us

How will rules be adopted?

DEQ plans to recommend that the Oregon Environmental Quality Commission adopt the temporary rules at the June 19, 2013, EQC meeting in Corvallis.

Accessibility information

DEQ is committed to accommodating people with disabilities. Please notify DEQ of any special physical or language accommodations or if you need information in large print, Braille or another format.

To make these arrangements, contact DEQ Communications and Outreach at 503-229-5696 or call toll-free in Oregon at 800-452-4011; fax to 503-229-6762; or email deqinfo@deq.state.or.us.

People with hearing impairments may call 711.

From: [DRUBACK Lissa](#)
To: [VANDEHEY Maggie](#)
Cc: [DRUBACK Lissa](#)
Subject: FW: TLQ F-Listing Records Audit
Date: Tuesday, January 07, 2014 10:23:16 AM
Attachments: [subscribers Gov Delivery Umatilla Chemical Depot List.csv](#)

Hi Maggie, here is the announcement that went out on GovDelivery on 5/23/2013. Attached is the Gov Delivery list for UMCDF. It is email addresses so it should be kept confidential. Is this all you need?

From: CLARK Liz
Sent: Tuesday, January 07, 2014 9:49 AM
To: DRUBACK Lissa
Subject: RE: TLQ F-Listing Records Audit

Here is the notice that went out on Gov Delivery. The link was to the announcement. The notice was also published on the DEQ website on the same date.

At the June 19, 2013 Environmental Quality Commission meeting in Corvallis, DEQ will propose that the EQC adopt temporary rules to modify when the hazardous waste "F" listing applies to demilitarization residue generated at the Umatilla Chemical Demilitarization Facility when that residue is determined to be free of blister and nerve agents. Adoption of these temporary rules would allow the facility to manage debris from the one building that is required to be demolished on site as a solid, not a hazardous, waste to allow it to be size reduced and used to make ramps to access other areas for demolition. The hazardous waste "F" listing would apply once the demolition debris was placed in containers to be transported and disposed of at a hazardous waste permitted treatment, storage and disposal facility.

Please click on the link below to read the "Proposed Rulemaking Announcement" that contains a link to the documents relied upon in the development of this proposal.

[Proposed Rule Making Announcement](#)

From: DRUBACK Lissa
Sent: Monday, January 06, 2014 4:13 PM
To: CLARK Liz
Subject: RE: TLQ F-Listing Records Audit

Can we provide this?

From: VANDEHEY Maggie
Sent: Monday, January 06, 2014 3:59 PM
To: DRUBACK Lissa
Subject: RE: TLQ F-Listing Records Audit

Lissa—

I need the UMCDF GovDelivery list and what you sent them. Thank you.

Maggie

From: DRUBACK Lissa
Sent: Monday, January 06, 2014 3:53 PM
To: VANDEHEY Maggie
Subject: RE: TLQ F-Listing Records Audit

Hi Maggie – this notice went out on 5/23/2013 to the people on the UMCDF gov delivery list. I do not have the email that announced it. We received no comments. What more do you need from me for documentation? I have Liz Clark looking into whether we can get a copy of the email from DEQ subscriptions.

From: VANDEHEY Maggie
Sent: Friday, January 03, 2014 1:39 PM
To: DRUBACK Lissa
Subject: TLQ F-Listing Records Audit

Hi Lisa

I'm doing a year-end audit of our rulemaking records. During this process, I bring the SharePointAtClose folder into the \\deqhq1\Rule_Development\Filed Rules\DEQ 6-2013 LQ F Listing – TEMP folders being careful not to overwrite any documents with the same names.

The record does not include the list of recipients that receive the attached Notice or any communications about developing this draft or responses from recipients. Would you please move these documents to the record?

Thank you and Happy New Year!

Maggie Vandehey
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05/07/2012 09:29 PM PDT
04/06/2012 02:33 PM PDT
03/25/2010 06:21 AM PDT

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aimeel.young@gmail.com	05/03/2009 05:54 PM PDT
air-tnb@hotmail.com	05/04/2009 09:38 AM PDT
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ajayrose7@gmail.com	08/23/2010 03:59 AM PDT
ajeffri@angrywithunicorns.org	12/28/2012 12:08 PM PST
ajkinnaman@earthlink.net	10/16/2011 09:05 PM PDT
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ajswilks@yahoo.com	05/01/2010 09:06 AM PDT
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akhistcet@rediffmail.com	05/16/2011 01:53 PM PDT
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alaa_2us@yahoo.com	11/05/2010 04:57 AM PDT
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alimo2002@gmail.com	04/13/2009 10:20 PM PDT
alishia_peralta@hotmail.com	10/12/2011 07:33 PM PDT
alismal@gmail.com	09/26/2010 11:40 PM PDT
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alrigaig@gmail.com	08/27/2009 02:19 AM PDT
alryteathen@yahoo.co.nz	05/22/2013 10:44 AM PDT
alternativenordsudsud@yahoo.fr	01/18/2010 11:35 PM PST
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wendy_scriven2008@yahoo.com	04/08/2010 07:54 PM PDT
wendyingle@hotmail.com	10/16/2012 06:18 PM PDT
west6772@yahoo.com	09/15/2010 04:19 PM PDT
whaleraven@gmail.com	03/15/2010 09:14 PM PDT
whales204@yahoo.com	12/14/2011 08:04 AM PST
wibisonoanom@yahoo.co.id	04/21/2011 08:47 AM PDT
wilfer5000@hotmail.com	10/12/2011 07:33 PM PDT
will@belwave.com	09/19/2012 11:39 AM PDT
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williamblake33@gmail.com	09/16/2011 03:53 PM PDT
williamgerst@hotmail.com	09/10/2009 07:52 AM PDT
willscogg@yahoo.com	05/15/2010 07:08 PM PDT
wilphinney@ctuir.org	02/09/2007 10:59 AM PST
wimunn@aol.com	06/27/2008 03:23 PM PDT
windy.beck@portlandoregon.gov	08/23/2013 08:12 AM PDT
wkajigili@yahoo.com	09/23/2010 04:42 AM PDT
wmelder@cox.net	01/31/2011 12:46 PM PST
wmfriend62@aol.com	02/03/2010 12:44 PM PST
wolflover.fetty18@gmail.com	01/14/2010 01:20 PM PST
wolfthatdreams@live.com	10/12/2011 07:33 PM PDT
world_wide_with_god_minstry@googlegroups.com	12/18/2012 09:43 PM PST
wrkcrew@yahoo.com	02/18/2010 05:37 AM PST
wroderick@spotlight29.com	12/02/2009 09:33 AM PST
wschmittle@hermiston.or.us	12/21/2011 08:31 AM PST
wshemart@aol.com	02/02/2011 04:11 PM PST
www.30305002@aluno.uac.pt	11/28/2010 12:16 PM PST
wyfeassistant@gmail.com	04/11/2012 12:42 AM PDT

x.wang@utah.edu	09/03/2010 11:46 AM PDT
xiaomingbaby61524@126.com	10/20/2010 06:29 PM PDT
xorex@pacbell.net	01/19/2012 12:53 PM PST
xtygeo@gmail.com	06/13/2005 06:44 PM PDT
xueyingang@gmail.com	06/09/2010 06:02 AM PDT
xuy1wen@hotmail.com	02/01/2009 07:03 PM PST
yahafdou1@yahoo.com	12/17/2008 02:51 AM PST
yali428@hotmail.com	01/21/2009 01:20 PM PST
yalli65@yahoo.com	06/20/2009 10:02 AM PDT
yariu24@hotmail.com	10/12/2011 07:33 PM PDT
yashicajackson81@yahoo.com	08/03/2010 03:34 AM PDT
yatin03env@gmail.com	05/19/2011 02:24 AM PDT
ybot3@yahoo.com	12/06/2011 06:29 AM PST
yeyidaco@yahoo.com	12/04/2010 07:34 AM PST
yonkersny2001@yahoo.com	10/07/2013 04:22 PM PDT
youngl@nclack.k12.or.us	02/07/2011 11:18 AM PST
yparedesq@hotmail.com	12/20/2008 11:21 AM PST
yuanji_cumt_work@126.com	06/03/2011 06:52 PM PDT
yuzhiguoiae@yahoo.com	02/22/2010 12:11 AM PST
zachary@alphaenvironmental.net	10/24/2011 04:02 PM PDT
zacnorman@gmail.com	04/17/2009 07:26 PM PDT
zakir07784@yahoo.com	01/23/2012 02:09 AM PST
zamar.qka@gmail.com	10/08/2010 09:37 AM PDT
zayana84@gmail.com	02/10/2010 10:01 PM PST
zdk4129@hotmail.com	03/12/2013 05:49 PM PDT
zeri118@hotmail.com	10/12/2011 07:33 PM PDT
ziakhattak12@gmail.com	04/25/2012 07:56 PM PDT
zjj_nju@hotmail.com	09/30/2013 02:18 AM PDT
zmartin65@yahoo.com	03/31/2013 08:50 PM PDT
zoe.desouky@erm.com	11/06/2008 04:29 PM PST
zoti.tedi@gmail.com	03/10/2009 06:47 AM PDT
zozo543@yahoo.com	03/29/2010 10:42 PM PDT
zrafi_ines@yahoo.fr	06/23/2009 06:14 AM PDT
ztariq1@gmail.com	05/29/2009 08:14 AM PDT
zulfan@chevron.com	01/14/2009 11:31 PM PST
zws1995@yahoo.com	06/25/2009 09:53 AM PDT

Secretary of State
Certificate and Order for Filing
TEMPORARY ADMINISTRATIVE RULES
A Statement of Need and Justification accompanies this form.

I certify that the attached copies are true, full and correct copies of the TEMPORARY Rule(s) adopted on Upon filing, by the
Department of Environmental Quality 340

Agency and Division

Administrative Rules Chapter Number

Maggie Vandehey

(503) 229-6878

Rules Coordinator

Telephone

811 SW Sixth Ave., Portland, OR 97204-1390

Address

To become effective 08/14/2013 through 02/10/2014.

RULE CAPTION

Hazardous Waste F Listing of Demilitarization Residue - Temporary

Not more than 15 words that reasonably identifies the subject matter of the agency's intended action.

RULEMAKING ACTION

Secure approval of new rule numbers with the Administrative Rules Unit prior to filing.

ADOPT:

AMEND:

340-102-0011

SUSPEND:

Statutory Authority:

ORS 466.020

Other Authority:

Statutes Implemented:

ORS 466.015 & 466.195

RULE SUMMARY

DEQ proposes a temporary rulemaking to modify when the hazardous waste "F" listing applies to demilitarization residue that is determined to be free of blister and nerve agents as determined in accordance with the facility permit.

FILED

8-14-13 10:42 AM

ARCHIVES DIVISION
SECRETARY OF STATE

Maggie Vandehey

maggie.vandehey@state.or.us

Rules Coordinator Name

Email Address

Secretary of State
STATEMENT OF NEED AND JUSTIFICATION

A Certificate and Order for Filing Temporary Administrative Rules accompanies this form

Department of Environmental Quality
Agency and Division

340
Administrative Rules Chapter Number

Hazardous Waste F Listing of Demilitarization Residue - Temporary

Rule Caption (Not more than 15 words that reasonably identifies the subject matter of the agency's intended action.)

In the Matter of:

Hazardous Waste F Listing of Demilitarization Residue - Temporary

Statutory Authority:

ORS 466.020

Other Authority:

Statutes Implemented:

ORS 466.015 & 466.195

Need for the Temporary Rule(s):

In 2000, the EQC adopted rules related to the appropriate hazardous waste listing for chemical agents and residues from demilitarization, treatment and testing of chemical agents. Demilitarization residues include a substantial portion of the wastes generated during operations and closure of the Umatilla Chemical Demilitarization Facility or Umatilla Chemical Storage Depot. The hazardous waste listing rule, which applies only in Oregon, ensured that these waste streams would be considered a hazardous waste regardless of whether they actually contained chemical agent or exhibited any hazardous waste characteristics. Since the time this rule went into place, scientific data has been developed that establishes safe levels of chemical agent. The facility has conducted analytical testing of the structure that is required by the permit to be demolished and DEQ has determined that these tests illustrate that the building and its components meet the definition of being "agent free" under the facility permit. Adoption of this temporary rule would allow demolition debris from the facility which has been determined to meet the definition of "agent free" under the facility permit and which is not otherwise considered to be hazardous waste to be managed on the ground as a solid waste prior to being placed in a container. This will allow the facility to size reduce the waste and utilize some of it to create ramps for easier access to the building for continued demolition prior to it being placed in a container. Once the waste is in a container it will be considered F listed hazardous waste and will be required to be transported and disposed of at a hazardous waste permitted treatment, storage, and disposal facility.

Documents Relied Upon, and where they are available:

Munitions Demilitarization Building Concrete Chip Sample Results Report and Results of Unventilated Monitoring Tests for the Munitions Demilitarization Building.

June 19-20, 2013, EQC meeting, agenda item D, attachment C

Contact Lissa Druback at (541) 298-7255 x222.

Justification of Temporary Rule(s):

The Commission finds that failure to promptly adopt the temporary rules will result in serious prejudice to the interests of the permittee and the public because it will have the following consequences:

Under the current rules, the permittee would be required to manage all demolition debris as hazardous waste. Requiring this type of management during the facility's demolition would be burdensome and excessive and would not result in any additional protection to human health and the environment. Further, it would negatively impact the efficiency of managing these wastes and drastically increase costs and slow down the final closure of the facility.

Maggie Vandehey

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Email Address

FILED

8-14-13 10:42 AM

ARCHIVES DIVISION
SECRETARY OF STATE

Housing Costs

Hazardous Waste F Listing of Demilitarization Residue - Temporary

DEQ determined the proposed rules would have no effect on the development cost of a 6,000-square-foot parcel and construction of a 1,200-square-foot detached, single-family dwelling on that parcel. The proposed rules only affect generators of demilitarization residue. The Umatilla Chemical Demilitarization Facility and the Umatilla Chemical Storage Depot are the only generators of that waste stream in the state.

DEPARTMENT OF ENVIRONMENTAL QUALITY

DIVISION 102

STANDARDS APPLICABLE TO GENERATORS OF HAZARDOUS WASTE

340-102-0011

Hazardous Waste Determination

(1) The provisions of this rule replace the requirements of **40 CFR 262.11**.

(2) A person who generates a residue as defined in OAR 340-100-0010 must determine if that residue is a hazardous waste using the following method:

(a) Persons should first determine if the waste is excluded from regulation under **40 CFR 261.4** or OAR 340-101-0004;

(b) Persons must then determine if the waste is listed as a hazardous waste in **Subpart D of 40 CFR Part 261**;

(c) Persons must then determine if the waste is listed under the following listings:

(A) The commercial chemical products, manufacturing chemical intermediates, or off-specification commercial chemical products or manufacturing chemical intermediates identified in 340-102-0011(2)(c)(A)(i) and (ii) are added to and made a part of the list in **40 CFR 261.33(e)**.

(i) P998...Blister agents (such as Mustard agent)

(ii) P999...Nerve agents (such as GB (Sarin) and VX); or

(B) Hazardous waste identified in 340-102-0011(2)(c)(B)(i) and (ii) are added to and made a part of the list in **40 CFR 261.31**.

(i) F998...Residues from demilitarization, treatment, and testing of blister agents (such as Mustard agent).

(ii) F999...Residues from demilitarization, treatment, and testing of nerve agents (such as GB (Sarin) and VX).

NOTE: Even if the waste is listed, the generator still has an opportunity under OAR 340-100-0022 to demonstrate to the Commission that the waste from his/her particular facility or operation is not a hazardous waste.

(C) Notwithstanding OAR 340-100-0010(2)(g) and OAR 340-102-0011(2)(c)(B)(i) and (ii), debris, as defined in 40 CFR 268.2(g), generated from demolition during closure processes and activities at the Umatilla Chemical Agent Disposal Facility (ORQ 000009431) is not F998 or F999 hazardous waste until containerized, provided the following conditions are met:

- (i) the debris is free of blister and nerve agent, as determined in accordance with the facility permit;
- (ii) the debris does not contain hazardous constituents at levels above otherwise applicable treatment standards; and
- (iii) the debris is containerized before leaving the facility.

(d) Regardless of whether a hazardous waste is listed through application of subsections 2(b) or 2(c) of this rule, persons must also determine whether the waste is hazardous under **Subpart C of 40 CFR Part 261** by either:

(A) Testing the waste according to the methods set forth in **Subpart C of 40 CFR 261**, or according to an equivalent method approved by the Department under OAR 340-100-0021.

NOTE: In most instances, the Department will not consider approving a test method until it has been approved by EPA.

(B) Applying knowledge of the hazard characteristic of the waste in light of the materials or the processes used.

(e) If the waste is determined to be hazardous, the generator must refer to Divisions 100-106 and **40 CFR Parts 264, 265, 268 and 273** for possible exclusions or restrictions pertaining to management of his/her specific waste.

NOTE: 40 CFR 268.3 prohibits dilution of a hazardous waste to meet Land Disposal Restriction treatment standards. Diluting waste without a permit to meet any hazardous waste standard is prohibited.

(f) If the waste is not identified as hazardous by application of subsection (2)(b) or (2)(c), and/or (2)(d) of this rule, persons must determine if the waste is listed under OAR 340-101-0033.

(3) A person who generates a residue, as defined in OAR 340-100-0010(2)(ee), must keep a copy of the documentation used to determine whether the residue is a hazardous waste, under section (2) of this rule, for a minimum of three years after the waste stream is no longer generated, or as prescribed in **40 CFR 262.40(c)**. If no documentation is created in making the wastestream determination, then no new documentation need be created.

Stat. Auth.: ORS 466.020 & 466.180

Stats. Implemented: ORS 466.015 & 466.195

Hist.: DEQ 8-1985, f. & ef. 7-25-85; DEQ 4-1991, f. & cert. ef. 3-15-91 (and corrected 6-20-91); DEQ 24-1992, f. 10-23-92, cert. ef. 11-1-92; DEQ 6-1994, f. & cert. ef. 3-22-94; DEQ 10-2000, f. & cert. ef. 7-21-00; DEQ 13-2002, f. & cert. ef. 10-9-02; DEQ 13-2003, f. & cert. ef. 10-24-03

Authorization Page
Generated on August 14, 2013 10:08AM
TEMPORARY ADMINISTRATIVE RULES

Department of Environmental Quality	340
Agency and Division	Administrative Rules Chapter Number
Maggie Vandehey	maggie.vandehey@state.or.us
Rules Coordinator	Email Address
811 SW Sixth Ave., Portland, OR 97204-1390	503-229-6878
Address	Telephone

Adopted on
08/14/2013 thru 02/10/2014

Effective dates

RULE CAPTION

Hazardous Waste F Listing of Demilitarization Residue - Temporary

Not more than 15 words

RULEMAKING ACTION

ADOPT:

AMEND: 340-102-0011

SUSPEND:

Stat. Auth.: ORS 466.020

Other Auth.:

Stats. Implemented: ORS 466.015 & 466.195

RULE SUMMARY

DEQ proposes a temporary rulemaking to modify when the hazardous waste 'F' listing applies to demilitarization residue that is determined to be free of blister and nerve agents as determined in accordance with the facility permit.

STATEMENT OF NEED AND JUSTIFICATION

Hazardous Waste F Listing of Demilitarization Residue - Temporary

In the Matter of

Munitions Demilitarization Building Concrete Chip Sample Results Report and Results of Unventilated Monitoring Tests for the Munitions Demilitarization Building.

June 19-20, 2013, EQC meeting, agenda item D, attachment C

Contact Andrea Matzke at 503-229-5384.

Documents Relied Upon, and where they are available

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Need for the Temporary Rule(s)

The Commission finds that failure to promptly adopt the temporary rules will result in serious prejudice to the interests of the permittee and the public because it will have the following consequences:

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Justification of Temporary Rules

Maggie Vandehey

Authorized Signer

Maggie Vandehey

Printed Name

8/14/2013

Date

Authorization Page replaces the ink signature on paper filings. Have your authorized signer sign and date, then scan and attach it to your filing. You must complete this step before submitting your Permanent and Temporary filings.

DEPARTMENT OF ENVIRONMENTAL QUALITY

DIVISION 102

STANDARDS APPLICABLE TO GENERATORS OF HAZARDOUS WASTE

340-102-0011

Hazardous Waste Determination

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Hist.: DEQ 8-1985, f. & ef. 7-25-85; DEQ 4-1991, f. & cert. ef. 3-15-91 (and corrected 6-20-91); DEQ 24-1992, f. 10-23-92, cert. ef. 11-1-92; DEQ 6-1994, f. & cert. ef. 3-22-94; DEQ 10-2000, f. & cert. ef. 7-21-00; DEQ 13-2002, f. & cert. ef. 10-9-02; DEQ 13-2003, f. & cert. ef. 10-24-03

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Certificate and Order for Filing
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Agency and Division

Administrative Rules Chapter Number

Maggie Vandehey

(503) 229-6878

Rules Coordinator

Telephone

811 SW Sixth Ave., Portland, OR 97204-1390

Address

To become effective 08/14/2013 through 02/10/2014.

RULE CAPTION

Hazardous Waste F Listing of Demilitarization Residue - Temporary

Not more than 15 words that reasonably identifies the subject matter of the agency's intended action.

RULEMAKING ACTION

Secure approval of new rule numbers with the Administrative Rules Unit prior to filing.

ADOPT:

AMEND:

340-102-0011

SUSPEND:

Statutory Authority:

ORS 466.020

Other Authority:

Statutes Implemented:

ORS 466.015 & 466.195



RULE SUMMARY

DEQ proposes a temporary rulemaking to modify when the hazardous waste "F" listing applies to demilitarization residue that is determined to be free of blister and nerve agents as determined in accordance with the facility permit.

Maggie Vandehey

maggie.vandehey@state.or.us

Rules Coordinator Name

Email Address

FILED

8-14-13 10:42 AM

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SECRETARY OF STATE

SHUTTLE

From:

Department of Environmental Quality Portland
811 SW 6th Ave
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1 of 1

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Legislative Counsel
900 Court St NE S 101
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