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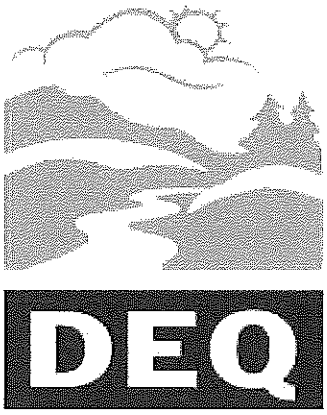
OREGON
ENVIRONMENTAL QUALITY
COMMISSION MEETING
MATERIALS 02/07/1997



State of Oregon
Department of Environmental Quality

A G E N D A

SPECIAL TELEPHONE CONFERENCE CALL MEETING
ENVIRONMENTAL QUALITY COMMISSION
February 7, 1997
2:30 p.m.

The public is invited to attend the meeting at the locations listed below

DEQ Conference Room 3A
811 S. W. Sixth Avenue
Portland, Oregon

and

State of Oregon Office Building, Henrietta Room
950 S.E. Columbia Drive
Hermiston, Oregon

Notes: Because of the uncertain length of time needed for each agenda item, the Commission may deal with any item at any time in the meeting. If a specific time is indicated for an agenda item, an effort will be made to consider that item as close to that time as possible. However, scheduled times may be modified if agreeable with participants. Anyone wishing to listen to the discussion on any item should arrive at the beginning of the meeting to avoid missing the item of interest.

No public forum will be provided.

Action Item: Issuance of Findings and Permit Decisions for Umatilla Chemical Depot

The final permit and findings package will be available for public inspection beginning February 3, 1997 at the following locations:

- DEQ Bend Office, 2146 NE Fourth St, Ste 104, Bend, OR 97701 (541-388-6146, x250)
- DEQ Hermiston Office, 256 E Hurlburt, Ste 117, Hermiston, OR 97838 (541-567-8297)
- Portland State University Library, 951 SW Hall, Portland, OR 97204

Hearings have already been held on the findings and draft hazardous waste permit for Umatilla Chemical Depot and the public comment period has closed. No comments regarding this item can be presented by any party to either the Commission or the Department on these items at any time during this meeting.

The Commission has set aside February 28, 1997, for their next meeting in Portland, Oregon.

If special physical, language or other accommodations are needed for this meeting, please advise the Director's Office, (503)229-5395 (voice)/(503)229-6993 (TTY) as soon as possible but at least 48 hours in advance of the meeting.

January 24, 1997

SUMMARY OF PUBLIC COMMENTS AND COMMISSION RESPONSES

Hazardous Waste Treatment and Storage Permit and
ORS 466.055 and 466.060 Criteria

U.S. Army Umatilla Chemical Depot
Umatilla Chemical Demilitarization Facility
I.D. Number: OR6 213 820 917

February 7, 1997

This Response to Comments document has the following Sections:

I. INTRODUCTION

The U.S. Army has applied for a hazardous waste treatment and storage permit to incinerate chemical agent munitions. The incineration treatment of the chemical agents, along with the various munition components consisting of explosives, propellants, and metal casings, is sometimes referred to as "demilitarization."

The Department of Environmental Quality reviewed the hazardous waste permit application and determined that the application was complete in accordance with Title 40 Code of Federal Regulations [40 CFR] Section 124.3.[1] The Department then issued for public comment the draft hazardous waste permit and the air contaminant discharge permit. Also issued for public comment was the Pre-Trial Burn Risk Assessment [PreRA], and, an invitation to comment on the ORS 466.055 and 466.060 criteria pursuant to which the Environmental Quality Commission must make affirmative findings before it can issue the hazardous waste permit. The comment period ended November 15, 1996.[2] At a meeting held on November 22, 1996, the Department was directed by the Commission to finalize the hazardous waste permit decisions.

[1] Adopted as Oregon Rule at OAR 340-100-002.
[2] The original comment period was extended on June 15, 1996.

II. Comments Received

All comments received during the comment period were provided to the Commission for its review. The comments were also placed in the administrative record maintained at the Department office in Bend.

At the November 22, 1996 meeting the Department provided to the Commission a summary of the comments received during the comment period. In general, the following statements can be made about the comments received.

Statistics

- 188 submittals (both verbal testimony and written comments) were received and entered into the administrative record. A submittal may have contained anywhere from one comment to tens of comments. Two submittals were noted but did not contain any testimony.
- Out of the 188 submittals, 67 were from the immediate region (e.g., Hermiston), 33 were from the region (e.g., Tri-Cities and Pendleton), and 88 were from Out-of-Region (e.g., Portland).
- Of the 67 submittals received from the immediate region, 48 (72%) were in favor of issuing the permit; 19 (28%) were not in favor of issuing the permit).
- Of the 33 submittals received from the region, 12 (36%) were in favor of issuing the permit; 21 (64%) were not in favor of issuing the permit.
- Of the 88 submittals from out-of-region, 6 (7%) were in favor of issuing the permit; 82 (93%) were not in favor of issuing the permit.

General

- The vast majority of the comments were directed towards the Commission's findings of the ORS criteria. Very few submittals dealt directly with specific conditions of the hazardous waste permit or specific items with the PreRA.
- Based on testimony from the several Commission meetings, the Commission directed that several additional permit conditions be included in the hazardous waste permit.
- Submittals received from the U.S. Army and EPA Region 10 did contain many comments on specific conditions of the permit.

Issue: Incineration Is The Best Available Technology

120 submittals contained comments regarding whether incineration represents best available technology. The significant comments are listed below.

Agree

- Incineration has been found by independent experts to be an acceptable technology
- JACADS and Tooele are operating effectively and efficiently.
- Currently, incineration is best available technology.
- Alternative technologies are immature for chemical agent.
- There are no viable alternative technology for metal parts and energetics except incineration.
- EPA and Department of Health and Human Services contends that incineration is a safe and proven method.
- Continued storage is not a technology.
- Incineration has more control than similar industrial applications.
- Need more time to develop information on alternative technologies.

Does Not Agree

- Incineration is unsafe and costly.
- JACADS and Tooele have had experiences of upsets and operational problems.
- Incineration emits toxic chemicals and would/could effect human health, the ecology, and agricultural crops.
- "Closed-loop" technologies are better because they do no emit toxic chemicals.
- Reconfiguration and storage, or continued storage alone, and then wait for a better treatment technology is preferable.
- Other countries are using alternative technologies.
- Some alternative technologies have commercial scale applications.

Issue: The Facility Will Not Cause An Adverse Effect To Human Health Or The Environment

66 submittals contained comments regarding whether an incineration facility is needed. The significant comments are listed in the following column.

Agree

- The permit should be issued to get rid of the threat posed by chemical agent munitions
- Findings and recommendations from the NRC conclude that incineration is safe
- Delays will cause increased exposure from leaks
- Incineration is a safe technology
- Johnston Atoll ecological monitoring has shown no adverse effect

Does Not Agree

- A comparative assessment between incineration and alternative technologies is necessary to reach a decision.
- Incineration will emit dioxins and other toxins which at low dosages will create human health and environmental harm.
- The Pre-Trial Burn Risk Assessment is flawed because it omitted issues such as not evaluating certain pathways, not evaluating synergistic effects, not accounting for all the potential chemical emissions, etc.,
- The Chemical Stockpile Emergency Preparedness Program (CSEPP) is not prepared; the permit

should not be issued until it is. Sirens are not working, schools are not pressurized, inadequate resources at local level, the Emergency Operations Center is not pressurized and must use gas masks in an emergency, inadequate notification to immediate community, etc.,.

Issue: Applicant Has Demonstrated Ability And Willingness To Operate The Facility In Compliance, And, Applicant Has Demonstrated Financial And Technical Capability.

24 submittals contained comments regarding whether the Applicant (U.S. Army) has demonstrated adequate capability. The significant comments are listed below:

Agree

- Tooele and JACADS are built and operated well
- There is trust in the government that they have the expertise and care to insure safe operation

Does Not Agree

- The Army has not been able to operate the JACADS and Tooele facilities adequately
- The Army has had a history of misrepresentation, misinformation, and deceit
- The Army has been fined at JACADS by EPA for non-compliance

Issue: The Facility Is Needed

41 submittals contained comments regarding whether an incineration facility is needed. The significant comments are listed below.

Agree

- The risk of storage, and storage operations are more than the risk of incineration

Does Not Agree

- Risk of storage is exaggerated and there is no need to rush to incinerate
- The risk of storage can be lessened by reconfiguration

Issue: Public Participation

27 submittals contained comments regarding public participation. The significant comments are listed below.

Agree

- Commenters appreciated the opportunity to address the Commission face-to-face
- Citizens have been active and informed on the project
- Public comment period was extended

Does Not Agree

- The State has not engaged in a government-to-government relationship with the Confederated Tribes of the Umatilla Indian Reservation [CTUIR]
- DEQ has acted as an advocate of incineration, or, not as an advocate for the environment

- DEQ has maintained an office in Hermiston
- Commission and Department decision-makers were not at some public forums
- There is too much information to review and not enough time for people to understand all the issues

Various Issues:

Several submittals contained comments regarding various issues. These issues mentioned are listed below.

Agree with Permitting

- The Chemical Stockpile Emergency Preparedness Program (CSEPP) is not prepared; the permit should be issued to get rid of the threat posed by chemical agent munitions.
- Objection to commenters from out-of-area trying to stop the project
- There is adequate oversight for the project
- Willing to accept processing risk over risk of continued storage
- There has been a multitude of research and studies on the project
- Munitions are deteriorating with age
- Transportation is not an option

Does Not Agree with Permitting

- Dissatisfaction with the Environmental Impact Statement
- Issues of Environmental Justice
- Oregon should follow lead of other states trying to halt incineration
- Issues of previous exposures from Hanford
- There should not be a delay in permitting the facility
- No import of other waste should be allowed Federal law prohibits transportation so the stockpile must stay and be destroyed
- The stockpile should be moved to Tooele, Utah or JACADS
- The need to limit operations during adverse weather conditions
- The Chemical Stockpile Emergency Preparedness Program is not adequately ready. Sirens are not working, schools are not pressurized, inadequate resources at local level, the Emergency Operations Center is not pressurized and must use gas masks in an emergency, inadequate notification to immediate community, etc.,

III. Direction From The Commission

At the November 22, 1996 meeting, the Commission made a unanimous finding that the baseline incineration system as proposed by the U.S. Army is best available technology. After making this finding, the Commission then deliberated on the remaining ORS 466.055 and 466.060 criteria. The Commission stated that the remaining criteria could be found to be made in the affirmative, and directed that the Department and the Attorney General draft an Order for Commission issuance.

After deliberations on the remaining findings, the Commission reviewed potential permit conditions to be included. The administrative record of this meeting indicates what specific conditions are needed to be included in the hazardous waste permit. The permit conditions, as deliberated by the Commission, have been added to the final hazardous permit (see Attachment A for a listing of the permit conditions).

The Commission also directed the Department to review the Army's comments and make the appropriate technical corrections to the hazardous waste permit, as well as corrections from other comments. The Department has conducted this review and made the appropriate changes. A discussion of these changes, as required by 40 CFR 124.17(a),[3] follows in section IV.D of this document.

IV. RESPONSE TO COMMENTS

IV.A. Commission Findings

The Order that the Commission issued on February 7, 1997, serves as the formal decision and Response to Comments. The Order makes effective the affirmative findings for the ORS 466.055, 466.060, and OAR 340-120 criteria, and, summarizes some of the important issues, along with the documentation and testimony (from the Commission's administrative record) used in reaching the hazardous waste decisions.

IV.B Summary of Commission Findings

The Order issued by the Commission on February 7, 1997 stated the following about the findings pursuant to ORS 466.055, 466.060, and OAR 340-120:

For the finding that the baseline incineration system is best available technology: The Commission heard testimony from alternative technology vendors, representatives of the Army (both representing alternative technology and incineration), and other experts and stakeholders from the public, both from within the region and without. The Commission also toured the similar-site facility located near Tooele, Utah.

The Commission deliberated on the issues of operational history at Johnston Atoll and Utah, issues of dioxin emissions and combustion by-product formation, issues of possible neutralization of mustard agent and other possible technologies, and issues of availability and schedule. The Commission reviewed many written comments and heard testimony regarding alternatives. The Commission was particularly persuaded by the BEST AVAILABLE TECHNOLOGY REPORT prepared for the Department by Ecology and Environment, Inc., the REPORT ON DIOXINS by Dr. Kristiina Iisa, Oregon State University, October 1996, and testimony of Army Assistant

[3] Adopted as Oregon Rule by OAR 340-100-002.

Secretary Decker regarding potential neutralization of mustard agent. The Commission has responded in the affirmative by vote on November 22, 1996 and issued an Order dated February 7, 1997 that the baseline system is best available technology.

For the finding of meeting the 250 foot setback: The Commission reviewed the Department's staff report dated November 15, 1996 and responded in the affirmative that the facility meets this criteria.

For the finding of owner and operator capability: The Commission heard testimony from representatives of environmental organizations, the Army, and from the public regarding the operational histories at Johnston Atoll and Tooele Chemical Disposal Facility. From the testimony and comments, the Commission responded in the affirmative that the owner and operator has demonstrated adequate capability.

For the finding of adequate compliance history: As above, the Commission heard testimony of representatives from environmental organizations, the Army, and from the public regarding the operational histories at Johnston Atoll and Tooele Chemical Disposal Facility. The Commission also reviewed the Department's November 1996 staff report regarding in detail the Army's compliance history at Johnston Atoll. From the testimony and comments, the Commission responded in the affirmative that the owner and operator has demonstrated adequate capability.

For the finding that there is a need for the facility: The Commission reviewed written comments and heard testimony regarding the need. The Commission heard issues regarding the potential to disassemble and store munitions, or even continue storage until better technologies are developed, rather than continue with incineration. The Commission concluded that UMCDF will reduce, and eventually eliminate the risk to surrounding communities from continued storage of the chemical agents and munitions; therefore the need for UMCDF is demonstrated because operation of the proposed facility will result in a higher level of protection. From the testimony and comments, the Commission responded in the affirmative.

For the finding that the facility will have no major adverse effect on public health and safety, or the environment: The Commission reviewed written comments and heard testimony regarding the potential effects from the UMCDF. The Commission became aware of issues of dioxin and furan formation, known and unknown combustion by-products of incineration, and of design controls proposed for the UMCDF. The Commission was particularly persuaded by the DRAFT PRE-TRIAL BURN RISK ASSESSMENT prepared for the Department by Ecology and Environment, Inc., REPORT ON DIOXINS by Dr. Kristiina Iisa, Oregon State University, PERSPECTIVES ON THE UMATILLA QUANTITATIVE RISK ASSESSMENT RESULTS prepared by SAIC, September 1996, DEQ and Ecology and Environment RESPONSE TO RISK ASSESSMENT ISSUES, and testimony of Gary Boyd, SAIC, before the Commission on November 22, 1996. From the testimony and comments, the Commission responded in the affirmative.

IV.C Changed Permit Conditions Based on Commission Direction

As part of its deliberations to make findings on the ORS criteria, based on the testimony from the Applicant, the Department, and from interested parties, and based on the comments and concerns raised by interested parties on emergency response issues, the Commission decided that additional permit conditions should be made part of the hazardous waste permit. In accordance with 40 CFR 124.17(a)(1),[4] Attachment A lists the permit conditions that have been added or changed. Through its deliberations, these conditions were included in the hazardous waste permit by the Commission because they are deemed necessary to protect human health and the environment.

IV.D. Technical Changes to Hazardous Waste Permit

At the November 22, 1996 Commission meeting, the Department was directed to incorporate the appropriate technical changes to the permit that do not affect policy decisions. The Department reviewed comments made by the U.S. Army and EPA Region 10 and made some permit condition changes based on significant comments.

In accordance with 40 CFR 124.17[4] and at the direction of the Commission, the following significant changes have been made to the hazardous waste permit.

IV.D.1 Technical Significant Changes Based on U.S. Army Comments

The following comments were submitted by the Army November 12, 1996 and entered as comment no. 143. The following Army comment numbers are from that submittal.

- Based on Army comment no. 9, the Department has changed permit condition I.W to allow for ten days reporting, instead of three, in order to allow the Permittee to report timely, and to allow for a more thorough report.
- Based on Army comment no. 22, the Department has changed permit condition IV.H.4. to allow primary sumps to be changed out for only those primary sump systems that detect liquids in interstitial areas (between liners), instead of all sumps per campaign/annually as proposed. The Department determined that based on the small size, the potential for tank system compromised by too much "chipping out" of the surrounding concrete, and the design of the buildings themselves which minimize releases to the environment, it would be better just to remove, inspect, and repair those primary sump systems that detect leaks between the primary liner and the secondary containment.

[4] Adopted as Oregon Rule at OAR 340-100-002.

- Based on Army comments no. 25 and no. 26, the Department agrees to the requirement for Total Organic Carbon (TOC) to be measured during the trial burns and not as a continuous emissions monitor. There is not a continuous emission monitor for TOC. The Department has eliminated permit condition VI.A.3.iii., and has added permit condition VI.A.5.iii.c.
- Based on Army comment no. 45, the Department agrees that sulfur dioxide (SO_2), hydrocarbon (HC), and hydrogen chloride (HCl) do not need to be measured in the Metal Parts Furnace discharge airlock. It is sufficient to measure the airlock for agent to protect human health. The Department has changed Attachment 4.

IV.D.2 Technical Significant Changes Based on U.S. EPA Region 10 Comments

The Department met with U.S. Environmental Protection Agency Region 10 on October 28-29, 1996 to discuss comments that Region 10 had. The Department developed a memorandum of these comments and placed it in the administrative record as comment no. 187 and as administrative record index no. 2252. The comment numbers referenced below are the EPA comment numbers found in the memorandum.

- Based on EPA comment no. 19, the Department agrees that an assessment and an appropriate permit modification must be submitted to address secondary containment for the MDB carbon filters units. This condition is consider necessary and consistent with the Army review of the Tooele Chemical Disposal Facility detection of agent leaks at the carbon filters units. The Department has added permit condition II.O.10 to require an assessment within 360 days of the effective date of the permit.
- Based on EPA comment no. 36, the Department agrees that the Brine Reduction Unit, which is a unit factored in the Pre-Trial Burn Risk Assessment, should have the same level of notification requirement for emission exceedances as for the incinerator units. Therefore, the Department has added permit condition V.A4.vii to include a notification requirement if emission rates are exceeded.
- Based on EPA comments no. 43 and no. 71, the Department agrees that additional chemical-specific feed rate limits should be added in addition to the munition feed rate limits. The additional feed rate limits will help insure that any potential variations in the chemical makeup of the waste will not exceed emission limits which have been determined to be protective in the Pre-Trial Burn Risk Assessment. The Department has revised Tables 6-1, 6-4, 6-8, and 6-12, and, permit conditionVII.B.3.i.

IV.E. Other Changes to the Permit

At the November 22, 1996 Commission meeting, the Department was directed to also make minor (i.e., insignificant) changes. The U.S. Army and U.S. Environmental Protection Agency made many minor comments regarding the draft hazardous waste permit.

The Department reviewed the comment and made appropriate changes. The changes in nature were: Typographical errors, editorial changes, wording change for clarification, modifications to aid in enforcement but not changing the requirement, changes to make condition consistent with the Part B permit application, changes to add more specificity but not changing the requirement, and changes to add more stringency without altering operations as proposed by the Permittee.

IV.F. Changes That Were Not Made to the Permit

As stated before, many comments were received from the Army and EPA Region 10, and just a few from others. The Commission and Department reviewed these comments and decided that there inclusion in the hazardous waste permit is not warranted.

ATTACHMENT A

1) *STORAGE RISK - MODIFICATION TO THE OPENING STATEMENT OF THE PERMIT INTRODUCTION FOUND ON PAGE 3*

The Permittee shall proceed expeditiously in procuring a contractor, beginning construction and commencing operation of the Umatilla Chemical Disposal Facility (UMCDF) in order to eliminate the significant risk to human health and the environment posed by the continued storage of the chemical weapons and chemical agents at the Umatilla Chemical Storage Depot.

2) *CSEPP READINESS- PERMIT CONDITIONS*

II.H.4. The Permittee shall submit within 150 days of the effective date of the permit and every 180 days thereafter until all agent at the Depot has been destroyed; a written progress report to the Department on the status of the Chemical Stockpile Emergency Preparedness Program (CSEPP). The report shall evaluate CSEPP's readiness for responding to an incident at the Umatilla Chemical Depot and should address at a minimum, status of community emergency sirens and distribution of tone alert radios of the Alert Notification System (ANS); the ability to provide off-site chemical agent monitoring and decontamination during an incident, off-site triage and treatment of casualties; and, the state of enhanced sheltering and positive pressurization of buildings, such as schools and hospitals, where substantial numbers of persons can be expected to gather daily. [40 CFR 270.32(b)(2)]

II.H.4.i. The Permittee shall not commence any thermal shakedown, trial burn, or post-trial burn activity, as defined in Module VI, until the Department has notified the Permittee in writing that it has received written notification from the Governor of the State of Oregon, or his designee, that an adequate emergency response program is in place and fully operational for protecting the general population (Chemical Stockpile Emergency Preparedness Program [CSEPP]). The written determination of the Governor (or his designee) shall be placed in the administrative record.[40 CFR 270.32(b)(2)]

3) *REMOVAL OF THE UMCDF STRUCTURES AT CLOSURE - PERMIT CONDITIONS*

II.J.9 Following submittal of all successful closure decontamination certifications in accordance with permit condition II.J.6., the Permittee shall dismantle, remove, and properly manage the disposal of the Munition Demilitarization Building (MDB) to an approved disposal facility. All other structures (e.g., buildings, parking areas, underground structures, fences, etc.,) within the boundary of the UMCDF shall also be properly managed and removed to a disposal facility. All areas where structures have been removed shall be reclaimed. If the Umatilla Chemical Depot - Local Reuse Authority (UCD-LRA) identifies a use for any of the structures, except the MDB, the Permittee may request a modification to this permit condition as a class 2 modification in accordance with 40 CFR §270.42(b) and 40 CFR §270.32(b)(2) to accommodate such use.

4) ***PAS CARBON FILTER UNIT AND EMISSION TO THE CARBON FILTERS - PERMIT CONDITIONS***

II.R. The Permittee shall build and operate the Pollution Abatement System (PAS)/PAS Filter Systems for each incinerator in accordance with the appropriate drawings of Volume 5, Attachment D-3 and Volume VII of the application, Sections D-5B-02, D-5B-07, D-6B-02, D-6B-04, D-7B-02, D-7B-05, D-8B-02, D-8B-04, and D-8B-05. Removal of any component of the PAS Filter Systems, including but not limited to, the quench tower, venturi scrubber, packed scrubber tower, demister, or carbon filter system shall be a Class 3 permit modification and shall require Commission approval.

VI.A GENERAL CONDITIONS DURING SHAKEDOWN, TRIAL-BURN AND POST TRIAL-BURN FOR ALL THE INCINERATORS AT THE UMCDF SITE.

VI.A.1 CONSTRUCTION AND MAINTENANCE [40 CFR§264.31](trial burn stds.)

vi. The Permittee shall maintain and operate each incinerator during shakedown, trial burn and post-trial burn periods in accordance with the operating requirements specified in this permit. Each incinerator shall meet the applicable performance standards specified in permit conditions VI.B.1., VI.C.1., VI.D.1., and VI.E.1. before entering each incinerator's carbon filter system.

VII.A.8 GENERAL OPERATION (normal operation standards)

The Permittee shall maintain and operate each incinerator during shakedown, trial burn and post-trial burn periods in accordance with the operating requirements specified in this permit. Each incinerator shall meet the applicable performance standards specified in permit conditions VII.B.2., VII.C.2., VII.D.2., and VII E.2. before entering each incinerator's carbon filter system.

5) ***EOC POSITIVE PRESSURE - PERMIT CONDITIONS***

II.H.5. For the UCD Emergency Operations Center (EOC) that gathers or disseminates information used to respond to off-Depot releases, the Permittee shall have a positive-pressurized Emergency Operations Center (EOC) that is adequately staffed 24 hours a day, 7 days a week. For this permit condition, "positive-pressurized" shall mean that ambient non-air vapors can not enter during times of emergency training, in the event of an actual emergency, or when tested on request by a Department inspector. The EOC must be pressurized within 300 days of the effective date of this permit, and the EOC is to comply with the staffing requirement within 90 days of the effective date of this permit.

6) ***ARMY ASSURANCE OF INDEPENDENT OVERSIGHT - PERMIT CONDITIONS***

II.E.5. The Permittee shall submit, within 180 calendar days of the effective date of this permit, a written program that describes the independent oversight process for the demilitarization construction activities, health and safety operations, and chemical agent process/handling operations at the UMCDF site. All reports generated by the oversight activities described in this report and reports of independent investigations shall be made available to the Department within 15 days of report finalization, in order for the Director of the Department to attest to the effectiveness of the independent oversight program. With written direction from the Department, the Permittee shall place such

inspection reports in a public repository in Hermiston, Oregon. In the case of special independent investigations caused by unique and non-routine incidents, the Permittee shall notify the Department of the initiation of the investigation within 24 hours of the time the Permittee becomes aware of the investigations. Upon request by the Department or Commission, the permittee shall provide an updated report describing the independent oversight program that incorporates all appropriate additions and changes in response to any deficiencies or requested changes. An independent oversight review shall be conducted on a periodic basis and when specifically requested by the Department or Commission. If the Commission is not satisfied with the independent oversight program or the results of the independent investigations, the Commission may issue an order to halt immediately all operations.

7) ***SHUTDOWN CONDITIONS - PERMIT CONDITIONS***

I.C.2. In accordance with ORS 466.170, the Commission may revoke this permit after public hearing upon a finding that the Permittee has violated any provision of ORS 466.005 to 466.385 and 466.890 or rules adopted pursuant thereto or any material condition of the permit, subject to review under ORS 183.310 to 183.550.

I.C.3. In accordance with ORS 466.200, if the Department or Commission finds that there is reasonable cause to believe that a clear and immediate danger to the public health, welfare or safety or to the environment exists from the continued operation of the site, the Department may halt demilitarization operations at the UMCDF. Non-compliance with the Department's written notification shall be a violation of this permit condition. Resumption of operations shall be initiated only upon written approval of the Department.

I.L.2. In accordance with ORS 466.180(1), the Department or Commission may limit, prohibit, or otherwise restrict storage and treatment operations at the UMCDF upon receipt of information that indicates non-compliance with permit condition I.L.1. The Department shall invoke such restrictions by written notification that specifies actions that the Permittee must take to comply. Non-compliance with the Department's written notification shall be a violation of this permit condition.

8) ***LIABILITY ISSUE - PERMIT CONDITIONS***

II.M. The Permittee must provide the liability coverage for sudden-and-accidental-occurrence requirements, as specified in 40 CFR §264.147, and provide liability insurance in accordance with ORS 466.105(5), and 40 CFR §264.147(a) unless exempted by state or federal law.

9) ***BAD WEATHER CONDITIONS - PERMIT CONDITIONS***

II.A.3. The Permittee shall submit to the Department a request for a Class 2 permit modification, within 180 days of the effective date of this permit, identifying the standard operating procedures that will be followed by Umatilla Chemical Depot and UMCDF personnel for handling and transporting munitions from the storage igloos to the UMCDF site, and for hazardous waste treatment, during inclement weather or adverse wind conditions. The Standard Operating Procedures must include a description of the weather conditions, in addition to the procedures that are to be followed by UCD and UMCDF personnel.

10) *BASELINE MONITORING - PERMIT CONDITIONS*

II.A.4.i. Within 180 days of the effective date of the permit, the Permittee shall submit for Department review and approval a Comprehensive Monitoring Program (CMP) workplan to implement a program that will confirm results of the Pre-Trial-Burn and Post-Trial-Burn Risk Assessments for each of the areas described: Zone 1 - the Umatilla Chemical Demilitarization Facility to the Umatilla Chemical Depot fenceline, Zone 2 - the Umatilla Chemical Depot fenceline out to a fifty-kilometer radius from the UMCDF common stack, and Zone 3 - locations beyond the fifty-kilometer radius. Within the CMP, Zone 1 also is to include a monitoring system to detect permitted and unpermitted releases. The CMP for Zones 1,2, and 3 shall, at a minimum, include the following elements:

1. Baseline Monitoring Program, to include;

a) A current assessment of contamination of environmental media (e.g., air, soil, surface water) and ecological endpoints that are potential receptors from pathways from the Umatilla Chemical Demilitarization Facility (UMCDF) for each of the three zones described above; and,

b) A sampling and analysis plan with appropriate Data Quality Objectives(DQO), for all three zones to assess potential impacts from the UMCDF site. The sampling and analysis plan must include the rationale for the size, number and location of sampling points, frequency of sampling, and the rationale for the parameters being monitored.

2. Perimeter Monitoring Program in Zone 1, to include;

a) A sampling and analysis plan with appropriate Data Quality Objectives(DQO) for monitoring within and at the perimeter of, Zone 1, that is capable, in a timely manner, of assessing emissions of unpermitted releases of chemical agent from the UMCDF site, and from storage igloos, and;

b) An update to the Contingency Plan to include appropriate reaction and notifications.

3. An Historical Record, to include a written reporting and file maintenance program to effectively maintain the results of the Comprehensive Monitoring Program on an annual basis.

II.A.4.ii. Within 60 days of the Department's written approval of the CMP workplan, or written approval of a Department-modified CMP workplan, the Permittee shall submit a permit modification in accordance with 40 CFR 270.42 to implement the CMP workplan. All information generated pursuant to the monitoring program shall be placed in a public repository in Hermiston following written direction from the Department.

11) *OFF-SITE WASTE PROHIBITION - PERMIT CONDITIONS*

II.B. Receipt of Off-site Waste, Processing and Shipment of Onsite Waste

1. The Permittee is not authorized to accept and therefore shall not receive hazardous waste, chemical agent, or munitions containing chemical agents from off-site.

2. The Permittee shall not send any material or waste off-site that has detectable amounts of GB, VX, or HD. Only material or wastes meeting the agent-free 3X or 5X criteria may be sent off-site.

3. The Permittee shall process, in accordance with this permit, all chemical agents, and chemical agent-contaminated materials currently stored or otherwise located at the Umatilla Chemical Depot.

12) ***PERMIT OPENER - PERMIT CONDITIONS***

I.C.4. If Congress or the President makes substantial changes in the Chemical Weapons Demilitarization program or in CSEPP, the Commission reserves the right to reopen the permit, after appropriate opportunity for the permittee and, at the discretion of the Commission, government officials and the public to be heard. If the Commission determines to reopen the permit, it may remove or modify conditions or impose additional conditions, relating to the reason for reopening the permit.

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

In the Matter of the Application of the United States Army for a Permit to Construct and Operate a Chemical Weapons Demilitarization Facility at the Umatilla Chemical Depot.	)))))	FINDINGS AND CONCLUSIONS OF THE COMMISSION AND ORDER

General Background Findings

A. This is a proceeding in which the United States Army (the Army) seeks a hazardous waste treatment permit for construction and operation of incinerator facilities to destroy chemical weapons stored at the Umatilla Chemical Depot. The Commission has jurisdiction pursuant to ORS 466.005 *et seq.*

2. The Umatilla Chemical Depot is a facility owned and operated by the Department of the Army. The identification number of this facility is OR6 213 820 917.

3. The Umatilla Chemical Depot encompasses approximately 20,000 acres in Morrow and Umatilla counties.

4. In September 1994, the Umatilla Chemical Depot finished destruction or removal of all conventional munitions from storage, leaving only chemical agent in storage.

5. The Umatilla Chemical Depot is currently listed for base realignment and closure following the completion of its current mission to destroy the chemical agent stockpile.

6. From 1962 to 1969 the Umatilla Chemical Depot received chemical warfare munitions for storage that included the nerve agents GB (also known as Sarin) and VX, and the blister agent HD (also known as mustard).

7. From 1969 to the present, the Umatilla Chemical Depot has continued to store chemical agent munitions termed "stockpile" munitions.

8. The Department of Defense Authorization Act of 1986 (Public Law 99-145) directed the Secretary of Defense to develop a program for the disposal of all stockpile chemical agent munitions. The law required that the stockpile be destroyed by September 30, 1994. The Army subsequently proceeded with a pilot agent incineration program at the mid-Pacific Johnston Atoll.

9. In response to Public Law 99-145 the Army established the Office of the Program Manager for Chemical Demilitarization with the responsibility to destroy the stockpile.

10. Public Law 99-145 also required that the Secretary of the Army compare and contrast the advantages and disadvantages of disposing of the chemical agents and munitions at stockpile storage locations, regional disposal centers, or a national disposal center, either inside or outside the continental United States. The Chemical Stockpile Disposal Program (CSDP) is the name of the program to address stockpile destruction.

11. The CSDP program was subjected to review under the National Environmental Policy Act (NEPA) of 1969 (Public Law 91-190, as amended). The Army proceeded with the NEPA process by first addressing stockpile destruction on a national level (e.g., whether to proceed with regional or onsite treatment) and then with site specific review. Analysis of risks of treatment

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alternatives and risks of storage were included as part of the Army's programmatic NEPA review.

12. The Army issued a FINAL PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT in January 1988. In February 1988, the Army promulgated its Record of Decision (53 Fed Reg 5816-5817) identifying on-site incineration at the continental stockpile sites as the preferred alternative for disposal of the nation's chemical weapons stockpile.

13. In September 1988, Congress passed Public Law 100-456 which ordered an evaluation period known as "Operation Verification Testing" (OVT) at the Johnston Atoll Chemical Agent Disposal System (JACADS) incineration facility to demonstrate safety and effectiveness before testing at continental stockpile sites. This law also extended the deadline for the elimination of the stockpile to April 30, 1997.

14. In February 1990, the Army completed the final PHASE 1 ENVIRONMENTAL REPORT FOR DISPOSAL OF CHEMICAL AGENTS AND MUNITIONS STORED AT UMATILLA DEPOT ACTIVITY, HERMISTON, OREGON. This report was pursuant to NEPA and was for site specific review of onsite treatment at Umatilla. The PHASE I ENVIRONMENTAL REPORT concurred that onsite treatment was appropriate for the Umatilla Chemical Depot and recommended proceeding with an Environmental Impact Statement for onsite incineration. Since this report was issued, the Army has proceeded with onsite review and has issued additional Environmental Impact Analyses. A final Environmental Impact

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Statement was issued May 1996 and a "Revised Final Environmental Impact Statement" was issued November 1996.

15. In December 1991, Congress passed Public Law 102-190 which extended the stockpile destruction date to July 31, 1999.

16. In October 1992, Congress passed Public Law 102-484 which extended the stockpile destruction deadline to December 31, 2004; directed the Army to submit a report to Congress on potential alternatives to incineration; established citizen advisory commissions in Kentucky, Indiana, and Maryland; and allowed for establishment of citizen commissions at other stockpile sites if requested by the Governor of that State. (The Governor of Oregon appointed a Citizens Demilitarization Advisory Committee for the Umatilla Chemical Depot on August 6, 1996.)

17. The Army, since 1966, has requested independent review from the National Academy of Sciences of various issues regarding chemical agent demilitarization. The National Academy of Sciences, acting on a request by the Army in 1987, formed a standing committee from its National Research Council (NRC) to review technical issues on chemical demilitarization. In March 1991, the NRC committee recommended to the Army review of alternative technologies for the chemical stockpile disposal and formulation of recommendations. The Army concurred. This NRC review culminated in a 1994 NRC report, RECOMMENDATIONS FOR THE DISPOSAL OF CHEMICAL AGENTS AND MUNITIONS, that recommended the Army's baseline incineration program be continued without delay (but with neutralization study for the two low-volume bulk sites at

Aberdeen, Maryland and Newport, Indiana). The report also recommended adding carbon filters to the proposed incinerators' pollution abatement systems. The Army concurred with the NRC's recommendation to add the carbon filters. In 1994 the Army submitted to Congress the agent destruction alternatives report, U.S. ARMY'S ALTERNATIVE DEMILITARIZATION TECHNOLOGY REPORT TO CONGRESS, required by Public Law 102-484 which included an analysis of information from the NRC report.

18. The 1994 NRC report also recommended that site-specific risk analyses of storage be conducted to confirm the conclusions of the "Final Programmatic Environmental Impact Statement" and confirm the wisdom in proceeding promptly with stockpile disposal. In response to this recommendation, the Army directed that a quantitative risk assessment be developed for the Umatilla Chemical Depot. The Army issued a report entitled, UMATILLA CHEMICAL AGENT DISPOSAL FACILITY PHASE 1 QUANTITATIVE RISK ASSESSMENT, in September 1996. The report concluded that the risk of disposal processing is significantly less than the risk of continued storage.

19. The Army has continued analysis of the issue of examining alternative technologies for the two low-level bulk agent sites. The Army solicited alternative technology proposals for the two low-volume bulk sites in August 1995, and requested the NRC to re-review and evaluate the status of a limited number of maturing alternative technologies. The NRC issued its report entitled REVIEW AND EVALUATION OF ALTERNATIVE CHEMICAL DISPOSAL TECHNOLOGIES

in October 1996. The NRC report recommended neutralization for the bulk sites located at Aberdeen, Maryland and Newport, Indiana. This report reviewed treatment for bulk liquid agents and metal containers and did not review possible alternative technologies for energetic (i.e., explosive) materials or munition casings such as those at Umatilla.

20. Congress passed Public Law 104-201 (Defense Authorization Act for Fiscal Year 1997) containing a requirement that a report be submitted by the Army to Congress that reviews alternative technologies for the disposal of assembled chemical munitions. This report must be submitted by December 31, 1997. The Army has informed the Governor of Oregon that because the risk of continued storage of agent at Umatilla is substantially greater than risks from incineration, and because incineration at this time is the only mature technology available, it desires to pursue the hazardous waste treatment permit for baseline incineration at Umatilla.

21. The U.S. and 130 other nations signed what is called the Chemical Weapons Convention in January 1993. The Senate, however, has not ratified this treaty. The treaty would mandate an international timetable to completely destroy chemical agent stockpiles, and would require irreversible destruction.

General Findings Pertaining to Permit Development

22. Anticipating the need to destroy the agent stockpile in accordance with Public Law 99-145, in September 1986 the Army submitted its first permit application to the Oregon Department

of Environmental Quality (Department) for a hazardous waste treatment permit for the construction and operation of a new hazardous waste incineration facility at the Umatilla Chemical Depot pursuant to 40 CFR § 270.10(a), adopted by OAR 340-100-002, and pursuant to ORS § 466.055, *et seq.*

23. In February 1987, the Department issued to the Army a first notice of deficiency (NOD) on the Umatilla hazardous waste treatment permit application. The NOD was issued pursuant to 40 CFR § 124.3 which is adopted by Oregon rule OAR 340-100-002. The NOD listed 57 issues to be addressed before the application could be considered complete.

24. In March 1987, the Army submitted its first Air Contaminant Discharge Permit application to the Department in accordance with OAR 340-28-1720. Pursuant to OAR 340-28-1900 the Army may not build and operate the facility until an Air Contaminant Discharge Permit is issued by the Department.

25. The Army responded in June 1987 to the Department's first NOD by updating the permit application.

26. During 1987 and 1988, the Department issued to the Army a second NOD for the Umatilla hazardous waste treatment permit application. The NOD listed 96 issues to be addressed by the applicant in order for the application to be considered complete.

27. In October 1990, the Army responded to the Department's second NOD for the Umatilla hazardous waste treatment permit application.

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28. In May 1991, the Army re-submitted the application to the Department for an air contaminant discharge permit for the Umatilla Chemical Depot.

29. In January 1992, the Department issued to the Army a third NOD on the Umatilla hazardous waste treatment permit application. The third NOD listed 60 issues to be addressed.

30. In November 1992, the Army responded to the Department's third NOD on the hazardous waste treatment permit application.

31. In April 1993, the Department issued to the Army a fourth NOD on the hazardous waste treatment permit application. The fourth NOD listed 19 issues to be addressed.

32. In June 1993, the Army responded to the Department's fourth NOD.

33. In July 1993, the Department and the Army entered into an Intergovernmental Cooperative Agreement for the continued review and processing of the hazardous waste treatment permit application.

34. In March 1994, the Department issued to the Army a fifth NOD on the Umatilla hazardous waste treatment permit application. The fifth NOD listed 19 issues to be addressed.

35. In April 1994, the Department opened a regional field office in Hermiston, Oregon staffed by a DEQ employee designated as the Umatilla permits coordinator. This position has had the primary duty of providing the public with information regarding

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the processing of the hazardous waste and air quality permit decisions.

36. On March 6, 1995, the Army responded to the Department's fifth NOD with an updated hazardous waste treatment permit application dated February 1995.

37. In August 1995, the Army submitted an updated application to the Department for an air contaminant discharge permit for the Umatilla Chemical Depot.

38. The Department requested from the Army further information in accordance with 40 CFR 124.3 (adopted by OAR § 340-100-002) on March 6, 1996. In accordance with 40 CFR § 124.3, the Army responded to the information request on March 21, 1995 with updated pages for the hazardous waste treatment permit application.

General Findings Pertaining to
Risk Assessment Conducted by the Department

1. During the Department's technical review of the hazardous waste treatment permit application, the U.S. Environmental Protection Agency (EPA) issued the DRAFT NATIONAL HAZARDOUS WASTE COMBUSTION STRATEGY (COMBUSTION STRATEGY) in May 1993. The COMBUSTION STRATEGY adopted a national policy requiring a risk assessment on the potential emissions from a hazardous waste incinerator before issuance of a draft hazardous waste treatment permit for public comment. The COMBUSTION STRATEGY also stated a preference for the regulatory agency issuing the permit (i.e., EPA or the State review agency) to conduct the risk assessment.

2. In March 1994, the Department stated in its fifth NOD that the Department would be conducting a risk assessment in accordance with the COMBUSTION STRATEGY.

3. In April 1994, EPA issued guidance on how to conduct a risk assessment for hazardous waste incinerators.

4. In October 1994, the Department began work with its contractor, Ecology and Environment, Inc., to conduct a risk assessment in accordance with the national combustion strategy following the guidance issued by EPA.

5. On April 5, 1996, the Department issued a draft hazardous waste treatment permit and a DRAFT PRE-TRIAL BURN RISK ASSESSMENT FOR THE PROPOSED UMATILLA CHEMICAL DEMILITARIZATION FACILITY. The risk assessment concluded that there would be no adverse effects on either public health or the environment from the operations of the Umatilla incinerator facility.

General Findings Pertaining to

Draft Permit and Public Participation

1. Pursuant to 40 CFR 124.10 (adopted by OAR § 340-100-002), the Department issued for public comment a draft hazardous waste treatment permit for the Umatilla Chemical Depot on April 5, 1966. In accordance with 40 CFR 124.8 (adopted by OAR § 340-100-002), the Department also issued a Fact Sheet which summarized the draft hazardous waste treatment permit. In accordance with 40 CFR 124.10 (adopted by OAR § 340-100-002), the Department sent out to the Umatilla Chemical Depot mailing list a

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Public Notice soliciting comments on the draft hazardous waste treatment permit.

2. In accordance with OAR 340-28-1900, the Department issued a draft air contaminant discharge permit for public comment on April 5, 1996. The Department also developed an AIR CONTAMINANT DISCHARGE PERMIT APPLICATION REVIEW REPORT, in accordance with Department policy, which summarizes the Department's review of the air application and rationale for setting draft air quality permit conditions. In accordance with OAR 340-28-1710, the Department issued a Public Notice to the Umatilla Chemical Depot mailing list soliciting comments on the draft air contaminant discharge permit.

3. In addition to soliciting comments for the draft hazardous waste treatment permit and air contaminant discharge permits, the Department issued for public notice on April 5, 1996, an INVITATION TO COMMENT ON FINDINGS (ORS 466.055 & ORS 466.060) AND RISK ASSESSMENT and mailed the notice to the Umatilla Chemical Depot mailing list. The notice requested comments on the Department's Pre-Trial Burn Risk Assessment, and on the ORS §§ 466.055 and 466.060 criteria (ORS Criteria) under which the Commission must make findings before a hazardous waste treatment permit can be issued. The Department issued this INVITATION TO COMMENT to encourage public participation.

4. The initial comment period on the draft environmental permits, risk assessment and ORS 466 criteria was to end at 5:00 p.m. on June 17, 1996 which allowed for a 73-day public

comment period. The 73-day comment period exceeds the minimum length of 45 days set forth in 40 CFR 124.10(b) (adopted by OAR § 340-100-002) for the draft hazardous waste treatment permit and the minimum length of 30 days set forth in OAR 340-28-1710 for the draft air contaminant discharge permit.

5. In accordance with 40 CFR 124.10 (adopted by OAR § 340-100-002) for the draft hazardous waste draft treatment permit, and OAR 340-28-1710 for the draft air contaminant discharge permit, four hearings were held to accept public comment. These four hearings were held as follows:

- On May 13, 1996 in Pendleton, Oregon at 7:00 p.m. at the Pendleton Convention Center.
- On May 14, 1996 in Kennewick, Washington at 7:00 p.m. at Kennewick High School.
- On May 29, 1996 in Portland, Oregon at 7:00 p.m. at the World Trade Center.
- On June 10, 1996 in Hermiston, Oregon at 7:00 p.m. at the Hermiston Community Center.

1. On June 17, 1996 the Department extended the comment period for the draft environmental permits, risk assessment and the ORS Criteria to November 15, 1996 at 5:00 p.m. This extension added an additional 151 days for a total public comment period of 224 days. Extension of the comment period for the draft hazardous waste treatment permit was in accordance with 40 CFR 124.13 (adopted by OAR § 340-100-002) and a public notice of the comment period extension was mailed to the Umatilla mailing list in accordance with 40 CFR 124.13 (adopted by OAR § 340-100-002).

2. Based on a request from a member of the public at the November 15, 1996 Commission meeting, the public comment period was extended to 8:00 a.m. on November 16, 1996.

3. A number of submittals containing comments were received by the Department at the close of the comment period. The Commission was provided complete copies of all comments received including written transcripts of public testimony accepted during public hearings. A summary of the comments received was tabulated by the Department and provided to the Commission at its November 22, 1996 meeting. Public comment and submittals were placed in the administrative record.

General Findings Pertaining to Development of Criteria Findings Required by ORS 466.055, 466.060 and OAR 340, Division 120

1. Oregon law requires that the Commission make findings on specific criteria before a final hazardous waste treatment permit can be issued. ORS 466.055, 466.060 and OAR 340, Division 120.

2. On January, 11, 1996, the Commission held a first work session on the proposed Umatilla permit in Portland, Oregon and was briefed on the proposed permit for incineration of chemical weapons at the Umatilla Chemical Depot. Presenters included DEQ staff and other interested parties.

3. On April 12, 1996, the Commission held a second work session and was briefed by DEQ staff on the proposed Umatilla permits and the Commission findings, and received limited public comment.

4. On May 10, 1996, the Commission and the Department Director traveled to Utah to tour the Tooele chemical demilitarization facility.

5. On May 16, 1996, the Commission conducted a third work session in Portland, Oregon. DEQ staff presented information about the air permit and the Pre-Trial Burn Risk Assessment, and counsel from the Oregon Department of Justice described the legal requirements and findings necessary to issue a hazardous waste treatment permit. A panel discussion was presented on alternatives to incineration. Presenters included the Army, vendors of three alternative technologies and Greenpeace.

6. On May 17, 1996, the Commission received a briefing from Oregon Emergency Management and Morrow County Emergency Management concerning the Chemical Stockpile Emergency Preparedness Program (CSEPP). Mick Harrison of Greenlaw and Dr. Mary O'Brien made presentations to the Commission on risk assessment. Public testimony was received, including testimony from representatives of local government, the Citizens Advisory Commission, Greenpeace and the Confederated Tribes of the Umatilla Indian Reservation.

7. On July 11, 1996, the Commission held a fourth work session in Portland, Oregon, and received a presentation from Department staff and the Department's risk assessment contractor, Ecology and Environment, Inc., responding to risk assessment issues. Army representatives responded to questions concerning safety and alternative permitting scenarios.

8. On August 22, 1996, the Commission conducted a fifth work session in Hermiston, Oregon. The session included a tour of the Umatilla Chemical Depot. A question-and-answer work session discussing various Umatilla subjects was held at the Hermiston Community Center. Discussion included proposed federal legislation, alternative technologies and stockpile storage risks. Professor Iisa of the Chemical Engineering Department of Oregon State University, under contract to the Department, provided verbal testimony on expected dioxin emissions from the proposed Umatilla incinerators. During an evening session the Commission heard oral public testimony on the proposed environmental permits.

9. On August 23, 1996, the Commission received a presentation from Department staff concerning the finding of "best available technology" that must be made before a new hazardous waste treatment permit can be issued by the Commission. The Commission adopted a list of evaluation criteria to be considered for evaluation of the best available technology.

10. On September 27, 1996, the Commission held a sixth work session in Portland, Oregon and heard public testimony from the Oregon Environmental Council, Greenpeace and the Oregon Center for Environmental Health. Department staff presented a draft staff report concerning Commission findings that must be made before issuance of a hazardous waste treatment permit for the incineration of nerve agents at Umatilla Chemical Depot. The Department also presented to the Commission a staff report

listing draft hazardous waste treatment permit conditions to address specific concerns raised by the Commission at previous work sessions.

11. On November 14, 1996, the Commission, during a regular meeting held in Portland, Oregon, heard a presentation from the Confederated Tribes of the Umatilla Indian Reservation which proposed a moratorium pending appointment of a Governor's task force to further evaluate alternatives to incineration of the Umatilla Chemical Depot stockpile, and construction of a munition reverse assembly facility.

12. On November 15, 1996, the Commission held a seventh work session in Portland, Oregon, reviewing the revised FINDINGS staff report and the draft BEST AVAILABLE TECHNOLOGY REPORT from the Department. Also at the meeting Professor Iisa of Oregon State University provided additional testimony to the Commission based on her October 29, 1996 written report concerning potential dioxin emissions from incineration.

13. The Commission, before its November 22, 1996 meeting, received and had the opportunity to review all public comment regarding the hazardous waste treatment permit including written transcripts of all scheduled public hearings.

14. On November 22, 1996, the Commission met in Pendleton, Oregon. The Commission heard final briefings from the Army and Department staff. At this meeting the Commission deliberated the issues, discussed public concerns as reflected in public testimony and comment and came to a consensus that incineration,

as proposed in the Army's hazardous waste treatment permit application, is the best available technology. The Commission determined that the remaining statutory findings could be made and directed Department staff to prepare a final hazardous waste treatment permit with additional and modified conditions and technical corrections.

15. An Administrative Record has been compiled and is maintained at the Department's Eastern Region office in Bend. An index to the Administrative Record is attached to this document as Appendix 1.

Findings and Conclusions Required by Statute and Regulation

16. ORS 466.055, ORS 466.060 and OAR 340, Division 120 require that certain specific affirmative findings be made by the Commission before a hazardous waste treatment facility permit for a new hazardous waste treatment facility may be issued in Oregon.

17. The Army's proposed chemical weapons demilitarization incinerator is a proposal for a new treatment facility subject to certain of these findings.

18. Pursuant to ORS 466.020 the Commission has previously adopted rules at OAR 340, Division 120 which implement, in part, ORS 466.055 and ORS 466.060. These rules distinguish between new *off-site* disposal and treatment facilities and *on-site* facilities. New on-site facilities are *exempted* from certain of the statutory findings enumerated in ORS 466.055.

19. The proposed Umatilla incinerator is a proposal for a new on-site treatment facility.

20. OAR 340-120-001(4) provides:

> (4) New hazardous waste and PCB treatment and disposal facilities, other than land disposal facilities, located on the site of waste generation (on-site), are only subject to these parts of Division 120:
>
> (a) 340-120-010(2)(c) — Technology and Design;
> (b) 340-120-010(2)(e) — Property Line Setback;
> (c) 340-120-010(2)(g) — Owner and Operator Capability;
> (d) 340-120-010(2)(h) — Compliance History;
> (e) 340-120-020 — Community Participation;
> (f) 340-120-030 — Permit Application Fee.

1. OAR 340-120-010(2)(c) requires:

> (c) *Technology and Design.* The facility shall use the best available technology as determined by the Department for treatment and disposal of hazardous waste and PCB. The facility shall use the highest and best practicable treatment and/or control as determined by the Department [Commission] to protect public health and safety and the environment.

1. The Commission has broad discretion in determining the parameters for a BAT determination under OAR 340-120-010(2)(c). In the absence of statutory or regulatory criteria, it is appropriate for the Commission to select specific criteria for evaluating best available technology on a case-specific basis.

2. Appropriate criteria for evaluating best available technology in this matter include the following:

A. Types, quantities and toxicity of discharges to the environment by operation of the proposed facility compared to the alternative technologies.

B. Risks of discharge from a catastrophic event or mechanical breakdown in operation of the proposed facility compared to the alternative technologies.

C. Safety of the operations of the proposed facility compared to the alternative technologies.

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D. The rapidity with which each of the technologies can destroy the stockpile.

E. Impacts that each of the technologies have on consumption of natural resources.

F. Time required to test the technology and have it fully operational; impacts of time on overall risk of stockpile storage.

1. Applying the BAT criteria adopted by the Commission and based on the administrative record the Army's proposed incineration technology satisfies the requirements for use of best available technology for destruction of agent at Umatilla. With the inclusion of carbon filters the proposed incineration technology will also employ the highest and best practicable emission control technology. The Commission's rationale for this finding includes the following considerations which are supported in detail by the record:

A. The proposed incineration technology is designed to have only minimal emissions of pollutants to the environment and will achieve an extremely high agent destruction removal efficiency (so-called six "9s" efficiency). The incineration technology may result in extremely minute air emissions including dioxins or similar chlorinated compounds. However, in addition to being extremely small, these emissions will be temporary and well within allowable regulatory limits.

B. The proposed incineration technology is designed with a high level of redundancy to minimize risk of discharge from a catastrophic event or mechanical breakdown in operation. Each

alternative technology reviewed would involve at least similar and potentially greater operational risks, each alternative has significant technical uncertainties, and none has been subjected to the kind of actual testing and operation the baseline technology has undergone.

C. The proposed incineration technology has been designed and tested for safety in operations at other facilities. Actual experience with internal system release detection and containment exists. Alternative technologies reviewed pose technical safety issues and there is no experience with operations.

D. The proposed incineration technology is currently available and will result in the most rapid destruction of the agent stored at Umatilla, a factor that must be juxtaposed to the risk of continued storage.

E. Alternative technologies reviewed, with the exception of neutralization, are years away from actual operational availability.

F. Neutralization technology for HD, while currently undergoing laboratory bench-scale study, would entail lengthy delay at Umatilla due, among other constraints, to the need for staging of construction to allow energetics destruction by incineration prior to construction and operation of neutralization facilities.

G. With the exception of neutralization, technologies reviewed appear to involve little impact on natural resource consumption. Neutralization of HD could, however, have

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significant implications for water consumption and disposal, and would need substantial ecological impact analyses.

H. Alternative technologies reviewed face testing and operational hurdles which would add years of delay to the agent destruction program at Umatilla.

I. Comparative costs of alternative technologies is considered a factor only with respect to neutralization of HD which would add significantly to costs of agent destruction at Umatilla by necessitating construction of a neutralization facility in addition to the proposed incinerators.

In making the above findings with respect to best available technology, the Commission is particularly persuaded by the analysis of alternative technologies in BEST AVAILABLE TECHNOLOGY FINDINGS REPORT UMATILLA CHEMICAL DEPOT, November 1996, prepared for the Department by Ecology and Environment, Inc.; the REPORT ON DIOXINS, by Kristina Iisa, Oregon State University, October 1996 and testimony of Dr. Iisa before the Commission; testimony of Army Assistant Secretary Decker and staff provided on November 22, 1996 concerning extensive delays associated with alternative technologies and potential natural resource impacts of bulk agent neutralization technology.

1. OAR 340-120-010(2)(e) requires:

> (e) *Property Line Setback:*
> (A) Hazardous waste and PCB treatment and disposal facilities, other than land disposal facilities, on the site of waste generation shall have at least a 250 foot separation between active waste

management areas and facilities, and property boundaries.

1. The proposed facility meets the requirement of a 250 foot setback from the property line. The proposed facility would be significantly more than 250 feet (nearly one mile) from the nearest Umatilla Chemical Depot boundary.

2. OAR 340-120-010(2)(g) requires:

> (g) *Owner and Operator Capability*. The owner, any parent company of the owner and the operator must demonstrate adequate financial and technical capability to properly construct and operate the facility. As evidence of financial capability, the following shall be submitted:
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> (A) Financial statements of the owner, any parent company of the owner, and the operator audited by an independent certified public accountant for three years immediately prior to the application;
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> (b) The estimated costs of construction and a plan detailing how the construction will be funded; and
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> (c) A three year projection, from the date the facility is scheduled to begin operating, of revenues and expenditures related to operating the facility. The projection should have sufficient detail to determine the financial capability of the owner, any parent company of the owner and the operator to properly operate the facility.

1. The Army will be the owner and principally responsible operator of the proposed facility. The Army has the legal responsibility to conduct the chemical weapons demilitarization program. The Army is currently managing operation of several agent incineration facilities. Although operations at the existing facilities have not been entirely without problems, the evidence is that the Army has adequately demonstrated the capability to properly construct and operate the facility.

The Army, as a department of the federal government, is exempt from hazardous waste law financial responsibility requirements. However, private contractors, when selected, must demonstrate required federal responsibility as well as technical capability.

The Army has the capability to construct and operate the proposed facility. When a contractor is selected, a hazardous waste treatment permit modification will be required to make that contractor a co-permittee, and the contractor will then be required to demonstrate technical and financial capability as well.

2. OAR 340-120-010(2)(h) requires:

> (h) *Compliance History.*
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> (a) The compliance history in owning and operating other similar facilities, if any, must indicate that the owner, any parent company of the owner and the operator have an ability and willingness to operate the proposed facility in compliance with the provisions of ORS 466 and any permit conditions that may be issued by the Department or Commission. As evidence of ability and willingness, the following shall be submitted:
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> (i) A listing of all responses to past actual violations identified by EPA or the appropriate state regulatory agency within the five years immediately preceding the filing of the requests for an Authorization to Proceed at any similar facility owned or operated by the applicant, owner, any parent company of the owner or operator during the period when the actions causing the violations occurred; and
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> (ii) Any written correspondence from EPA and the appropriate state regulatory agency which discusses the present compliance status of any similar facility owned or operated by the applicant, owner, any parent company of the owner or operator.
>
> (B) Upon request of the Department, the applicant shall also provide responses to the past violations identified prior to the five years preceding the filing of an Authorization to Proceed and the specific compliance history for a particular facility owned or

operated by the applicant, any parent company of the owner or operator.

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1. The Department staff report of November 1996 outlines in some detail the Army's compliance history at Johnston Atoll Chemical Agent Disposal (JACADs) facility and the Tooele Chemical Disposal facility, both considered relevant to the Commission's evaluation of the Army's compliance history for purposes of the pending permit application. While instances of non-compliance by the Army have been documented, most have been deemed relatively minor in nature and appropriate corrective actions have been taken by the Army to address the few more serious violations. The Department has had no unresolvable enforcement problems with respect to existing hazardous waste activities at the Umatilla Chemical Depot.

2. The regulations pertaining to the management of hazardous waste are voluminous and complex; nevertheless, strict enforcement is warranted. However, it is not unusual for a hazardous waste facility undergoing a compliance inspection to have violations, especially in the area of recordkeeping. The permit applicant has often self-reported permit violations at other facilities. The Army as owner and operator of the proposed Umatilla facility has demonstrated sufficient ability and willingness to operate the proposed facility in compliance with statutory and regulatory provisions.

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1. OAR 340-120-020 requires:

Community Participation

340-120-020 (1) The Commission finds that local community participation is important in the siting and in reviewing the design, construction and operation of hazardous waste and PCB treatment and disposal facilities.

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(3) The Director may appoint a committee *[citizen committee]* to review a proposed facility described in rule 340-120-001(4).

1. In view of the existing Governor's Advisory Committee, the Director has not appointed an additional citizens committee pursuant to OAR 340-120-020(3).

The Department and the Commission have engaged in an extensive effort to encourage both local and non-local citizen involvement in this permit application process. The extent of these efforts is reflected in the Commission's General Background Findings and in the administrative record. There has been opportunity for public input on all aspects of the permit application process including the health and ecological risk assessments and the legally required Commission findings. The public involvement has greatly assisted the Commission in its decisions.

2. ORS 466.055(5) requires a Commission finding that:

(5) The proposed hazardous waste or PCB treatment or disposal facility has no major adverse effect on either:

(a) Public health and safety; or

(b) Environment of adjacent lands.

The detailed human health and ecological risk assessments conducted by the Army and by the Department did not show that the proposed facility will have major adverse effects on either human health and safety or the environment. The proposed facility uses engineering process controls and state of the art pollution abatement systems which will undergo extensive testing before operations commence. Revised permit conditions incorporate additional safeguards as specifically directed by the Commission at its meeting in Pendleton, Oregon on November 22, 1996. The proposed facility, if operated as designed and in accordance with the permit, will not have any major adverse effect on public health and safety, or to the environment of adjacent lands.

In making the above finding regarding no adverse effects, the Commission is particularly persuaded by the REPORT ON DIOXINS by Kristina Iisa, Oregon State University, October 1996, and Dr. Iisa's testimony before the Commission; the DRAFT PRE-TRIAL RISK ASSESSMENT PROPOSED UMATILLA CHEMICAL DEMILITARIZATION FACILITY, HERMISTON, OREGON, Vols. I and II prepared by Ecology and Environment, Inc., April 1996; PERSPECTIVES ON THE UMATILLA QUANTITATIVE RISK ASSESSMENT RESULTS prepared by SAIC, September 1996 and testimony of Gary Boyd, SAIC, before the Commission November 22, 1996; and DEQ AND ECOLOGY & ENVIRONMENT RESPONSE TO RISK ASSESSMENT ISSUES, July 11, 1996

1. ORS 466.055(4)(a) requires a Commission finding that:

> (4) The need for the facility is demonstrated by:
> (a) Lack of adequate current treatment or disposal capacity in Oregon, Washington, Idaho, and Alaska to handle hazardous waste or PCB generated by Oregon Companies;

(b) A finding that operation of the proposed facility would result in a higher level of protection of the public health and safety or environment; or

(c) Significantly lower treatment or disposal costs to Oregon Companies.

The proposed facility is a non-commercial, sole purpose on-site treatment facility. The requirements of ORS 466.055(4) are directed at commercial facilities. Nevertheless, the Commission finds that the operation of the proposed facility will reduce, and eventually eliminate, the risk to surrounding communities from continued storage of the chemical agents and munitions for which there is presently no disposal option. The need for the facility is demonstrated because operation of the proposed facility will result in a higher level of protection for public health and safety and for the environment.

Now, therefore, IT IS ORDERED that:

1. These findings, conclusions and order shall constitute the Commission's final permit decision and response to public input.

2. Nothing contained herein shall be deemed to waive or restrict any authority of the Commission or any other entity of the State of Oregon to take such action as may be deemed necessary within the scope of their respective authorities to prevent or abate an imminent hazard to public health or the environment.

3. These findings, conclusions and order are based upon representation of the permittee and evidence in the administrative record. Upon evidence of any material

misrepresentation or material change in facts, the Commission reserves the right, in its discretion, to reopen these proceedings.

4. The Commission shall issue the hazardous waste treatment permit to the United States Army containing the terms and conditions agreed upon by the Commission as of the date of this Order.

5. This Order shall be an Order In Other Than A Contested Case, and no administrative appeal of the permit shall be provided to the applicant or third parties.

DATED this _____ day of _____, 1997.

Henry Lorenzen
Chair

Carol A. Whipple
Vice-Chair

Linda A. McMahan
Member

Tony Van Vliet
Member

Melinda Eden
Member

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Henry Lorenzen, Chair
For the Environmental Quality Commission

LE:kt/LHE0336.PLE

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

In the Matter of the Application of the United States Army for a Permit to Construct and Operate a Chemical Weapons Demilitarization Facility at the Umatilla Chemical Depot.	FINDINGS AND CONCLUSIONS OF THE COMMISSION AND ORDER

General Background Findings

1. This is a proceeding in which the United States Army (the Army) seeks a hazardous waste treatment permit for construction and operation of incinerator facilities to destroy chemical weapons stored at the Umatilla Chemical Depot. The Commission has jurisdiction pursuant to ORS 466.005 *et seq.*

2. The Umatilla Chemical Depot is a facility owned and operated by the Department of the Army. The identification number of this facility is OR6 213 820 917.

3. The Umatilla Chemical Depot encompasses approximately 20,000 acres in Morrow and Umatilla counties.

4. In September 1994, the Umatilla Chemical Depot finished destruction or removal of all conventional munitions from storage, leaving only chemical agent in storage.

5. The Umatilla Chemical Depot is currently listed for base realignment and closure following the completion of its current mission to destroy the chemical agent stockpile.

6. From 1962 to 1969 the Umatilla Chemical Depot received chemical warfare munitions for storage that included the nerve agents GB (also known as Sarin) and VX, and the blister agent HD (also known as mustard).

7. From 1969 to the present, the Umatilla Chemical Depot has continued to store chemical agent munitions termed "stockpile" munitions.

8. The Department of Defense Authorization Act of 1986 (Public Law 99-145) directed the Secretary of Defense to develop a program for the disposal of all stockpile chemical agent munitions. The law required that the stockpile be destroyed by September 30, 1994. The Army subsequently proceeded with a pilot agent incineration program at the mid-Pacific Johnston Atoll.

9. In response to Public Law 99-145 the Army established the Office of the Program Manager for Chemical Demilitarization with the responsibility to destroy the stockpile.

10. Public Law 99-145 also required that the Secretary of the Army compare and contrast the advantages and disadvantages of disposing of the chemical agents and munitions at stockpile storage locations, regional disposal centers, or a national disposal center, either inside or outside the continental United States. The Chemical Stockpile Disposal Program (CSDP) is the name of the program to address stockpile destruction.

11. The CSDP program was subjected to review under the National Environmental Policy Act (NEPA) of 1969 (Public Law 91-190, as amended). The Army proceeded with the NEPA process by first addressing stockpile destruction on a national level (e.g., whether to proceed with regional or onsite treatment) and then with site specific review. Analysis of risks of treatment

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alternatives and risks of storage were included as part of the Army's programmatic NEPA review.

12. The Army issued a FINAL PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT in January 1988. In February 1988, the Army promulgated its Record of Decision (53 Fed Reg 5816-5817) identifying on-site incineration at the continental stockpile sites as the preferred alternative for disposal of the nation's chemical weapons stockpile.

13. In September 1988, Congress passed Public Law 100-456 which ordered an evaluation period known as "Operation Verification Testing" (OVT) at the Johnston Atoll Chemical Agent Disposal System (JACADS) incineration facility to demonstrate safety and effectiveness before testing at continental stockpile sites. This law also extended the deadline for the elimination of the stockpile to April 30, 1997.

14. In February 1990, the Army completed the final PHASE 1 ENVIRONMENTAL REPORT FOR DISPOSAL OF CHEMICAL AGENTS AND MUNITIONS STORED AT UMATILLA DEPOT ACTIVITY, HERMISTON, OREGON. This report was pursuant to NEPA and was for site specific review of onsite treatment at Umatilla. The PHASE I ENVIRONMENTAL REPORT concurred that onsite treatment was appropriate for the Umatilla Chemical Depot and recommended proceeding with an Environmental Impact Statement for onsite incineration. Since this report was issued, the Army has proceeded with onsite review and has issued additional Environmental Impact Analyses. A final Environmental Impact

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Statement was issued May 1996 and a "Revised Final Environmental Impact Statement" was issued November 1996.

15. In December 1991, Congress passed Public Law 102-190 which extended the stockpile destruction date to July 31, 1999.

16. In October 1992, Congress passed Public Law 102-484 which extended the stockpile destruction deadline to December 31, 2004; directed the Army to submit a report to Congress on potential alternatives to incineration; established citizen advisory commissions in Kentucky, Indiana, and Maryland; and allowed for establishment of citizen commissions at other stockpile sites if requested by the Governor of that State. (The Governor of Oregon appointed a Citizens Demilitarization Advisory Committee for the Umatilla Chemical Depot on August 6, 1996.)

17. The Army, since 1966, has requested independent review from the National Academy of Sciences of various issues regarding chemical agent demilitarization. The National Academy of Sciences, acting on a request by the Army in 1987, formed a standing committee from its National Research Council (NRC) to review technical issues on chemical demilitarization. In March 1991, the NRC committee recommended to the Army review of alternative technologies for the chemical stockpile disposal and formulation of recommendations. The Army concurred. This NRC review culminated in a 1994 NRC report, RECOMMENDATIONS FOR THE DISPOSAL OF CHEMICAL AGENTS AND MUNITIONS, that recommended the Army's baseline incineration program be continued without delay (but with neutralization study for the two low-volume bulk sites at

Aberdeen, Maryland and Newport, Indiana). The report also recommended adding carbon filters to the proposed incinerators' pollution abatement systems. The Army concurred with the NRC's recommendation to add the carbon filters. In 1994 the Army submitted to Congress the agent destruction alternatives report, U.S. ARMY'S ALTERNATIVE DEMILITARIZATION TECHNOLOGY REPORT TO CONGRESS, required by Public Law 102-484 which included an analysis of information from the NRC report.

18. The 1994 NRC report also recommended that site-specific risk analyses of storage be conducted to confirm the conclusions of the "Final Programmatic Environmental Impact Statement" and confirm the wisdom in proceeding promptly with stockpile disposal. In response to this recommendation, the Army directed that a quantitative risk assessment be developed for the Umatilla Chemical Depot. The Army issued a report entitled, UMATILLA CHEMICAL AGENT DISPOSAL FACILITY PHASE 1 QUANTITATIVE RISK ASSESSMENT, in September 1996. The report concluded that the risk of disposal processing is significantly less than the risk of continued storage.

19. The Army has continued analysis of the issue of examining alternative technologies for the two low-level bulk agent sites. The Army solicited alternative technology proposals for the two low-volume bulk sites in August 1995, and requested the NRC to re-review and evaluate the status of a limited number of maturing alternative technologies. The NRC issued its report entitled REVIEW AND EVALUATION OF ALTERNATIVE CHEMICAL DISPOSAL

TECHNOLOGIES in October 1996. The NRC report recommended neutralization for the bulk sites located at Aberdeen, Maryland and Newport, Indiana. This report reviewed treatment for bulk liquid agents and metal containers and did not review possible alternative technologies for energetic (i.e., explosive) materials or munition casings such as those at Umatilla.

20. Congress passed Public Law 104-201 (Defense Authorization Act for Fiscal Year 1997) containing a requirement that a report be submitted by the Army to Congress that reviews alternative technologies for the disposal of assembled chemical munitions. This report must be submitted by December 31, 1997. The Army has informed the Governor of Oregon that because the risk of continued storage of agent at Umatilla is substantially greater than risks from incineration, and because incineration at this time is the only mature technology available, it desires to pursue the hazardous waste treatment permit for baseline incineration at Umatilla.

21. The U.S. and 130 other nations signed what is called the Chemical Weapons Convention in January 1993. The Senate, however, has not ratified this treaty. The treaty would mandate an international timetable to completely destroy chemical agent stockpiles, and would require irreversible destruction.

General Findings Pertaining to Permit Development

22. Anticipating the need to destroy the agent stockpile in accordance with Public Law 99-145, in September 1986 the Army submitted its first permit application to the Oregon Department

of Environmental Quality (Department) for a hazardous waste treatment permit for the construction and operation of a new hazardous waste incineration facility at the Umatilla Chemical Depot pursuant to 40 CFR § 270.10(a), adopted by OAR 340-100-002, and pursuant to ORS § 466.055, *et seq.*

23. In February 1987, the Department issued to the Army a first notice of deficiency (NOD) on the Umatilla hazardous waste treatment permit application. The NOD was issued pursuant to 40 CFR § 124.3 which is adopted by Oregon rule OAR 340-100-002. The NOD listed 57 issues to be addressed before the application could be considered complete.

24. In March 1987, the Army submitted its first Air Contaminant Discharge Permit application to the Department in accordance with OAR 340-28-1720. Pursuant to OAR 340-28-1900 the Army may not build and operate the facility until an Air Contaminant Discharge Permit is issued by the Department.

25. The Army responded in June 1987 to the Department's first NOD by updating the permit application.

26. During 1987 and 1988, the Department issued to the Army a second NOD for the Umatilla hazardous waste treatment permit application. The NOD listed 96 issues to be addressed by the applicant in order for the application to be considered complete.

27. In October 1990, the Army responded to the Department's second NOD for the Umatilla hazardous waste treatment permit application.

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28. In May 1991, the Army re-submitted the application to the Department for an air contaminant discharge permit for the Umatilla Chemical Depot.

29. In January 1992, the Department issued to the Army a third NOD on the Umatilla hazardous waste treatment permit application. The third NOD listed 60 issues to be addressed.

30. In November 1992, the Army responded to the Department's third NOD on the hazardous waste treatment permit application.

31. In April 1993, the Department issued to the Army a fourth NOD on the hazardous waste treatment permit application. The fourth NOD listed 19 issues to be addressed.

32. In June 1993, the Army responded to the Department's fourth NOD.

33. In July 1993, the Department and the Army entered into an Intergovernmental Cooperative Agreement for the continued review and processing of the hazardous waste treatment permit application.

34. In March 1994, the Department issued to the Army a fifth NOD on the Umatilla hazardous waste treatment permit application. The fifth NOD listed 19 issues to be addressed.

35. In April 1994, the Department opened a regional field office in Hermiston, Oregon staffed by a DEQ employee designated as the Umatilla permits coordinator. This position has had the primary duty of providing the public with information regarding

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the processing of the hazardous waste and air quality permit decisions.

36. On March 6, 1995, the Army responded to the Department's fifth NOD with an updated hazardous waste treatment permit application dated February 1995.

37. In August 1995, the Army submitted an updated application to the Department for an air contaminant discharge permit for the Umatilla Chemical Depot.

38. The Department requested from the Army further information in accordance with 40 CFR 124.3 (adopted by OAR § 340-100-002) on March 6, 1996. In accordance with 40 CFR § 124.3, the Army responded to the information request on March 21, 1995 with updated pages for the hazardous waste treatment permit application.

General Findings Pertaining to Risk Assessment Conducted by the Department

39. During the Department's technical review of the hazardous waste treatment permit application, the U.S. Environmental Protection Agency (EPA) issued the DRAFT NATIONAL HAZARDOUS WASTE COMBUSTION STRATEGY (COMBUSTION STRATEGY) in May 1993. The COMBUSTION STRATEGY adopted a national policy requiring a risk assessment on the potential emissions from a hazardous waste incinerator before issuance of a draft hazardous waste treatment permit for public comment. The COMBUSTION STRATEGY also stated a preference for the regulatory agency issuing the permit (i.e., EPA or the State review agency) to conduct the risk assessment.

40. In March 1994, the Department stated in its fifth NOD that the Department would be conducting a risk assessment in accordance with the COMBUSTION STRATEGY.

41. In April 1994, EPA issued guidance on how to conduct a risk assessment for hazardous waste incinerators.

42. In October 1994, the Department began work with its contractor, Ecology and Environment, Inc., to conduct a risk assessment in accordance with the national combustion strategy following the guidance issued by EPA.

43. On April 5, 1996, the Department issued a draft hazardous waste treatment permit and a DRAFT PRE-TRIAL BURN RISK ASSESSMENT FOR THE PROPOSED UMATILLA CHEMICAL DEMILITARIZATION FACILITY. The risk assessment concluded that there would be no adverse effects on either public health or the environment from the operations of the Umatilla incinerator facility.

General Findings Pertaining to Draft Permit and Public Participation

44. Pursuant to 40 CFR 124.10 (adopted by OAR § 340-100-002), the Department issued for public comment a draft hazardous waste treatment permit for the Umatilla Chemical Depot on April 5, 1966. In accordance with 40 CFR 124.8 (adopted by OAR § 340-100-002), the Department also issued a Fact Sheet which summarized the draft hazardous waste treatment permit. In accordance with 40 CFR 124.10 (adopted by OAR § 340-100-002), the Department sent out to the Umatilla Chemical Depot mailing list a

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Public Notice soliciting comments on the draft hazardous waste treatment permit.

45. In accordance with OAR 340-28-1900, the Department issued a draft air contaminant discharge permit for public comment on April 5, 1996. The Department also developed an AIR CONTAMINANT DISCHARGE PERMIT APPLICATION REVIEW REPORT, in accordance with Department policy, which summarizes the Department's review of the air application and rationale for setting draft air quality permit conditions. In accordance with OAR 340-28-1710, the Department issued a Public Notice to the Umatilla Chemical Depot mailing list soliciting comments on the draft air contaminant discharge permit.

46. In addition to soliciting comments for the draft hazardous waste treatment permit and air contaminant discharge permits, the Department issued for public notice on April 5, 1996, an INVITATION TO COMMENT ON FINDINGS (ORS 466.055 & ORS 466.060) AND RISK ASSESSMENT and mailed the notice to the Umatilla Chemical Depot mailing list. The notice requested comments on the Department's Pre-Trial Burn Risk Assessment, and on the ORS §§ 466.055 and 466.060 criteria (ORS Criteria) under which the Commission must make findings before a hazardous waste treatment permit can be issued. The Department issued this INVITATION TO COMMENT to encourage public participation.

47. The initial comment period on the draft environmental permits, risk assessment and ORS 466 criteria was to end at 5:00 p.m. on June 17, 1996 which allowed for a 73-day public

comment period. The 73-day comment period exceeds the minimum length of 45 days set forth in 40 CFR 124.10(b) (adopted by OAR § 340-100-002) for the draft hazardous waste treatment permit and the minimum length of 30 days set forth in OAR 340-28-1710 for the draft air contaminant discharge permit..

48. In accordance with 40 CFR 124.10 (adopted by OAR § 340-100-002) for the draft hazardous waste draft treatment permit, and OAR 340-28-1710 for the draft air contaminant discharge permit, four hearings were held to accept public comment. These four hearings were held as follows:

- On May 13, 1996 in Pendleton, Oregon at 7:00 p.m. at the Pendleton Convention Center.
- On May 14, 1996 in Kennewick, Washington at 7:00 p.m. at Kennewick High School.
- On May 29, 1996 in Portland, Oregon at 7:00 p.m. at the World Trade Center.
- On June 10, 1996 in Hermiston, Oregon at 7:00 p.m. at the Hermiston Community Center.

49. On June 17, 1996 the Department extended the comment period for the draft environmental permits, risk assessment and the ORS Criteria to November 15, 1996 at 5:00 p.m. This extension added an additional 151 days for a total public comment period of 224 days. Extension of the comment period for the draft hazardous waste treatment permit was in accordance with 40 CFR 124.13 (adopted by OAR § 340-100-002) and a public notice of the comment period extension was mailed to the Umatilla mailing list in accordance with 40 CFR 124.13 (adopted by OAR § 340-100-002).

50. Based on a request from a member of the public at the November 15, 1996 Commission meeting, the public comment period was extended to 8:00 a.m. on November 16, 1996.

51. A number of submittals containing comments were received by the Department at the close of the comment period. The Commission was provided complete copies of all comments received including written transcripts of public testimony accepted during public hearings. A summary of the comments received was tabulated by the Department and provided to the Commission at its November 22, 1996 meeting. Public comment and submittals were placed in the administrative record.

General Findings Pertaining to Development of Criteria Findings Required by ORS 466.055, 466.060 and OAR 340, Division 120

52. Oregon law requires that the Commission make findings on specific criteria before a final hazardous waste treatment permit can be issued. ORS 466.055, 466.060 and OAR 340, Division 120.

53. On January, 11, 1996, the Commission held a first work session on the proposed Umatilla permit in Portland, Oregon and was briefed on the proposed permit for incineration of chemical weapons at the Umatilla Chemical Depot. Presenters included DEQ staff and other interested parties.

54. On April 12, 1996, the Commission held a second work session and was briefed by DEQ staff on the proposed Umatilla permits and the Commission findings, and received limited public comment.

55. On May 10, 1996, the Commission and the Department Director traveled to Utah to tour the Tooele chemical demilitarization facility.

56. On May 16, 1996, the Commission conducted a third work session in Portland, Oregon. DEQ staff presented information about the air permit and the Pre-Trial Burn Risk Assessment, and counsel from the Oregon Department of Justice described the legal requirements and findings necessary to issue a hazardous waste treatment permit. A panel discussion was presented on alternatives to incineration. Presenters included the Army, vendors of three alternative technologies and Greenpeace.

57. On May 17, 1996, the Commission received a briefing from Oregon Emergency Management and Morrow County Emergency Management concerning the Chemical Stockpile Emergency Preparedness Program (CSEPP). Mick Harrison of Greenlaw and Dr. Mary O'Brien made presentations to the Commission on risk assessment. Public testimony was received, including testimony from representatives of local government, the Citizens Advisory Commission, Greenpeace and the Confederated Tribes of the Umatilla Indian Reservation.

58. On July 11, 1996, the Commission held a fourth work session in Portland, Oregon, and received a presentation from Department staff and the Department's risk assessment contractor, Ecology and Environment, Inc., responding to risk assessment issues. Army representatives responded to questions concerning safety and alternative permitting scenarios.

59. On August 22, 1996, the Commission conducted a fifth work session in Hermiston, Oregon. The session included a tour of the Umatilla Chemical Depot. A question-and-answer work session discussing various Umatilla subjects was held at the Hermiston Community Center. Discussion included proposed federal legislation, alternative technologies and stockpile storage risks. Professor Iisa of the Chemical Engineering Department of Oregon State University, under contract to the Department, provided verbal testimony on expected dioxin emissions from the proposed Umatilla incinerators. During an evening session the Commission heard oral public testimony on the proposed environmental permits.

60. On August 23, 1996, the Commission received a presentation from Department staff concerning the finding of "best available technology" that must be made before a new hazardous waste treatment permit can be issued by the Commission. The Commission adopted a list of evaluation criteria to be considered for evaluation of the best available technology.

61. On September 27, 1996, the Commission held a sixth work session in Portland, Oregon and heard public testimony from the Oregon Environmental Council, Greenpeace and the Oregon Center for Environmental Health. Department staff presented a draft staff report concerning Commission findings that must be made before issuance of a hazardous waste treatment permit for the incineration of nerve agents at Umatilla Chemical Depot. The Department also presented to the Commission a staff report

listing draft hazardous waste treatment permit conditions to address specific concerns raised by the Commission at previous work sessions.

62. On November 14, 1996, the Commission, during a regular meeting held in Portland, Oregon, heard a presentation from the Confederated Tribes of the Umatilla Indian Reservation which proposed a moratorium pending appointment of a Governor's task force to further evaluate alternatives to incineration of the Umatilla Chemical Depot stockpile, and construction of a munition reverse assembly facility.

63. On November 15, 1996, the Commission held a seventh work session in Portland, Oregon, reviewing the revised FINDINGS staff report and the draft BEST AVAILABLE TECHNOLOGY REPORT from the Department. Also at the meeting Professor Iisa of Oregon State University provided additional testimony to the Commission based on her October 29, 1996 written report concerning potential dioxin emissions from incineration.

64. The Commission, before its November 22, 1996 meeting, received and had the opportunity to review all public comment regarding the hazardous waste treatment permit including written transcripts of all scheduled public hearings.

65. On November 22, 1996, the Commission met in Pendleton, Oregon. The Commission heard final briefings from the Army and Department staff. At this meeting the Commission deliberated the issues, discussed public concerns as reflected in public testimony and comment and came to a consensus that incineration,

as proposed in the Army's hazardous waste treatment permit application, is the best available technology. The Commission determined that the remaining statutory findings could be made and directed Department staff to prepare a final hazardous waste treatment permit with additional and modified conditions and technical corrections.

66. An Administrative Record has been compiled and is maintained at the Department's Eastern Region office in Bend. An index to the Administrative Record is attached to this document as Appendix 1.

Findings and Conclusions Required by Statute and Regulation

67. ORS 466.055, ORS 466.060 and OAR 340, Division 120 require that certain specific affirmative findings be made by the Commission before a hazardous waste treatment facility permit for a new hazardous waste treatment facility may be issued in Oregon.

68. The Army's proposed chemical weapons demilitarization incinerator is a proposal for a new treatment facility subject to certain of these findings.

69. Pursuant to ORS 466.020 the Commission has previously adopted rules at OAR 340, Division 120 which implement, in part, ORS 466.055 and ORS 466.060. These rules distinguish between new *off-site* disposal and treatment facilities and *on-site* facilities. New on-site facilities are *exempted* from certain of the statutory findings enumerated in ORS 466.055.

70. The proposed Umatilla incinerator is a proposal for a new on-site treatment facility.

71. OAR 340-120-001(4) provides:

> (4) New hazardous waste and PCB treatment and disposal facilities, other than land disposal facilities, located on the site of waste generation (on-site), are only subject to these parts of Division 120:
>
> (a) 340-120-010(2)(c) — Technology and Design;
> (b) 340-120-010(2)(e) — Property Line Setback;
> (c) 340-120-010(2)(g) — Owner and Operator Capability;
> (d) 340-120-010(2)(h) — Compliance History;
> (e) 340-120-020 — Community Participation;
> (f) 340-120-030 — Permit Application Fee.

72. OAR 340-120-010(2)(c) requires:

> (c) *Technology and Design*. The facility shall use the best available technology as determined by the Department for treatment and disposal of hazardous waste and PCB. The facility shall use the highest and best practicable treatment and/or control as determined by the Department [Commission] to protect public health and safety and the environment.

73. The Commission has broad discretion in determining the parameters for a BAT determination under OAR 340-120-010(2)(c). In the absence of statutory or regulatory criteria, it is appropriate for the Commission to select specific criteria for evaluating best available technology on a case-specific basis.

74. Appropriate criteria for evaluating best available technology in this matter include the following:

A. Types, quantities and toxicity of discharges to the environment by operation of the proposed facility compared to the alternative technologies.

B. Risks of discharge from a catastrophic event or mechanical breakdown in operation of the proposed facility compared to the alternative technologies.

C. Safety of the operations of the proposed facility compared to the alternative technologies.

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D. The rapidity with which each of the technologies can destroy the stockpile.

E. Impacts that each of the technologies have on consumption of natural resources.

F. Time required to test the technology and have it fully operational; impacts of time on overall risk of stockpile storage.

75. Applying the BAT criteria adopted by the Commission and based on the administrative record the Army's proposed incineration technology satisfies the requirements for use of best available technology for destruction of agent at Umatilla. With the inclusion of carbon filters the proposed incineration technology will also employ the highest and best practicable emission control technology. The Commission's rationale for this finding includes the following considerations which are supported in detail by the record:

A. The proposed incineration technology is designed to have only minimal emissions of pollutants to the environment and will achieve an extremely high agent destruction removal efficiency (so-called six "9s" efficiency). The incineration technology may result in extremely minute air emissions including dioxins or similar chlorinated compounds. However, in addition to being extremely small, these emissions will be temporary and well within allowable regulatory limits.

agent?

B. The proposed incineration technology is designed with a high level of redundancy to minimize risk of discharge from a catastrophic event or mechanical breakdown in operation. Each alternative technology reviewed would involve at least similar

and potentially greater operational risks, each alternative has significant technical uncertainties, and none has been subjected to the kind of actual testing and operation the baseline technology has undergone.

C. The proposed incineration technology has been designed and tested for safety in operations at other facilities. Actual experience with internal system release detection and containment exists. Alternative technologies reviewed pose technical safety issues and there is no experience with operations.

D. The proposed incineration technology is currently available and will result in the most rapid destruction of the agent stored at Umatilla, a factor that must be juxtaposed to the risk of continued storage.

E. Alternative technologies reviewed, with the exception of neutralization, are years away from actual operational availability.

F. Neutralization technology for HD, while currently undergoing laboratory bench-scale study, would entail lengthy delay at Umatilla due, among other constraints, to the need for staging of construction to allow energetics destruction by incineration prior to construction and operation of neutralization facilities.

G. With the exception of neutralization, technologies reviewed appear to involve little impact on natural resource consumption. Neutralization of HD could, however, have

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significant implications for water consumption and disposal, and would need substantial ecological impact analyses.

H. Alternative technologies reviewed face testing and operational hurdles which would add years of delay to the agent destruction program at Umatilla.

I. Comparative costs of alternative technologies is considered a factor only with respect to neutralization of HD which would add significantly to costs of agent destruction at Umatilla by necessitating construction of a neutralization facility in addition to the proposed incinerators.

In making the above findings with respect to best available technology, the Commission is particularly persuaded by the analysis of alternative technologies in BEST AVAILABLE TECHNOLOGY FINDINGS REPORT UMATILLA CHEMICAL DEPOT, November 1996, prepared for the Department by Ecology and Environment, Inc.; the REPORT ON DIOXINS, by Kristina Iisa, Oregon State University, October 1996 and testimony of Dr. Iisa before the Commission; testimony of Army Assistant Secretary Decker and staff provided on November 22, 1996 concerning extensive delays associated with alternative technologies and potential natural resource impacts of bulk agent neutralization technology.

76. OAR 340-120-010(2)(e) requires:

> (e) *Property Line Setback:*
> (A) Hazardous waste and PCB treatment and disposal facilities, other than land disposal facilities, on the site of waste generation shall have at least a 250 foot separation between active waste management areas and facilities, and property boundaries.

77. The proposed facility meets the requirement of a 250 foot setback from the property line. The proposed facility would be significantly more than 250 feet (nearly one mile) from the nearest Umatilla Chemical Depot boundary.

78. OAR 340-120-010(2)(g) requires:

> (g) *Owner and Operator Capability.* The owner, any parent company of the owner and the operator must demonstrate adequate financial and technical capability to properly construct and operate the facility. As evidence of financial capability, the following shall be submitted:
>
> (A) Financial statements of the owner, any parent company of the owner, and the operator audited by an independent certified public accountant for three years immediately prior to the application;
>
> (b) The estimated costs of construction and a plan detailing how the construction will be funded; and
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> (c) A three year projection, from the date the facility is scheduled to begin operating, of revenues and expenditures related to operating the facility. The projection should have sufficient detail to determine the financial capability of the owner, any parent company of the owner and the operator to properly operate the facility.

79. The Army will be the owner and principally responsible operator of the proposed facility. The Army has the legal responsibility to conduct the chemical weapons demilitarization program. The Army is currently managing operation of several agent incineration facilities. Although operations at the existing facilities have not been entirely without problems, the evidence is that the Army has adequately demonstrated the capability to properly construct and operate the facility.

The Army, as a department of the federal government, is exempt from hazardous waste law financial responsibility requirements. However, private contractors, when selected, must

demonstrate required ~~federal~~ financial responsibility as well as technical capability.

The Army has the capability to construct and operate the proposed facility. When a contractor is selected, a hazardous waste treatment permit modification will be required to make that contractor a co-permittee, and the contractor will then be required to demonstrate technical and financial capability as well.

80. OAR 340-120-010(2)(h) requires:

> (h) *Compliance History.*
> (a) The compliance history in owning and operating other similar facilities, if any, must indicate that the owner, any parent company of the owner and the operator have an ability and willingness to operate the proposed facility in compliance with the provisions of ORS 466 and any permit conditions that may be issued by the Department or Commission. As evidence of ability and willingness, the following shall be submitted:
> (i) A listing of all responses to past actual violations identified by EPA or the appropriate state regulatory agency within the five years immediately preceding the filing of the requests for an Authorization to Proceed at any similar facility owned or operated by the applicant, owner, any parent company of the owner or operator during the period when the actions causing the violations occurred; and
> (ii) Any written correspondence from EPA and the appropriate state regulatory agency which discusses the present compliance status of any similar facility owned or operated by the applicant, owner, any parent company of the owner or operator.
> (B) Upon request of the Department, the applicant shall also provide responses to the past violations identified prior to the five years preceding the filing of an Authorization to Proceed and the specific compliance history for a particular facility owned or operated by the applicant, any parent company of the owner or operator.

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81. The Department staff report of November 1996 outlines in some detail the Army's compliance history at Johnston Atoll Chemical Agent Disposal (JACADs) facility and the Tooele Chemical Disposal facility, both considered relevant to the Commission's evaluation of the Army's compliance history for purposes of the pending permit application. While instances of non-compliance by the Army have been documented, most have been deemed relatively minor in nature and appropriate corrective actions have been taken by the Army to address the few more serious violations. The Department has had no unresolvable enforcement problems with respect to existing hazardous waste activities at the Umatilla Chemical Depot.

82. The regulations pertaining to the management of hazardous waste are voluminous and complex; nevertheless, strict enforcement is warranted. However, it is not unusual for a hazardous waste facility undergoing a compliance inspection to have violations, especially in the area of recordkeeping. The permit applicant has often self-reported permit violations at other facilities. The Army as owner and operator of the proposed Umatilla facility has demonstrated sufficient ability and willingness to operate the proposed facility in compliance with statutory and regulatory provisions.

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83. OAR 340-120-020 requires:

> **Community Participation**
> **340-120-020** (1) The Commission finds that local community participation is important in the siting and in reviewing the design, construction and operation of hazardous waste and PCB treatment and disposal facilities.
>
> ...
>
> (3) The Director may appoint a committee *[citizen committee]* to review a proposed facility described in rule 340-120-001(4).

84. In view of the existing Governor's Advisory Committee, the Director has not appointed an additional citizens committee pursuant to OAR 340-120-020(3).

The Department and the Commission have engaged in an extensive effort to encourage both local and non-local citizen involvement in this permit application process. The extent of these efforts is reflected in the Commission's General Background Findings and in the administrative record. There has been opportunity for public input on all aspects of the permit application process including the health and ecological risk assessments and the legally required Commission findings. The public involvement has greatly assisted the Commission in its decisions.

85. ORS 466.055(5) requires a Commission finding that:

> (5) The proposed hazardous waste or PCB treatment or disposal facility has no major adverse effect on either:
> (a) Public health and safety; or
> (b) Environment of adjacent lands.

The detailed human health and ecological risk assessments conducted by the Army and by the Department did not show that the

proposed facility will have major adverse effects on either human health and safety or the environment. The proposed facility uses engineering process controls and state of the art pollution abatement systems which will undergo extensive testing before operations commence. Revised permit conditions incorporate additional safeguards as specifically directed by the Commission at its meeting in Pendleton, Oregon on November 22, 1996. The proposed facility, if operated as designed and in accordance with the permit, will not have any major adverse effect on public health and safety, or to the environment of adjacent lands.

In making the above finding regarding no adverse effects, the Commission is particularly persuaded by the REPORT ON DIOXINS by Kristina Iisa, Oregon State University, October 1996, and Dr. Iisa's testimony before the Commission; the DRAFT PRE-TRIAL RISK ASSESSMENT PROPOSED UMATILLA CHEMICAL DEMILITARIZATION FACILITY, HERMISTON, OREGON, Vols. I and II prepared by Ecology and Environment, Inc., April 1996; PERSPECTIVES ON THE UMATILLA QUANTITATIVE RISK ASSESSMENT RESULTS prepared by SAIC, September 1996 and testimony of Gary Boyd, SAIC, before the Commission November 22, 1996; and DEQ AND ECOLOGY & ENVIRONMENT RESPONSE TO RISK ASSESSMENT ISSUES, July 11, 1996

86. ORS 466.055(4)(a) requires a Commission finding that:

> (4) The need for the facility is demonstrated by:
> (a) Lack of adequate current treatment or disposal capacity in Oregon, Washington, Idaho, and Alaska to handle hazardous waste or PCB generated by Oregon Companies;
> (b) A finding that operation of the proposed facility would result in a higher level of protection of the public health and safety or environment; or
> (c) Significantly lower treatment or disposal costs to Oregon Companies.

The proposed facility is a non-commercial, sole purpose on-site treatment facility. The requirements of ORS 466.055(4) are directed at commercial facilities. Nevertheless, the Commission finds that the operation of the proposed facility will reduce, and eventually eliminate, the risk to surrounding communities from continued storage of the chemical agents and munitions for which there is presently no disposal option. The need for the facility is demonstrated because operation of the proposed facility will result in a higher level of protection for public health and safety and for the environment.

Now, therefore, IT IS ORDERED that:

1. These findings, conclusions and order shall constitute the Commission's final permit decision and response to public input.

2. Nothing contained herein shall be deemed to waive or restrict any authority of the Commission or any other entity of the State of Oregon to take such action as may be deemed necessary within the scope of their respective authorities to prevent or abate an imminent hazard to public health or the environment.

3. These findings, conclusions and order are based upon representation of the permittee and evidence in the administrative record. Upon evidence of any material misrepresentation or material change in facts, the Commission reserves the right, in its discretion, to reopen these proceedings.

4. The Commission shall issue the hazardous waste treatment permit to the United States Army containing the terms and conditions agreed upon by the Commission as of the date of this Order, including those additional permit conditions specifically ordered by the Commission as reflected in Attachment A to Appendix 3 which is incorporated herein.

5. This Order shall be an Order In Other Than A Contested Case, and no administrative appeal of the permit shall be provided to the applicant or third parties.

DATED this _____ day of _____, 1997.

Henry Lorenzen
Chair

Carol A. Whipple
Vice-Chair

Linda A. McMahan
Member

Tony Van Vliet
Member

Melinda Eden
Member

_____
Henry Lorenzen, Chair
For the Environmental Quality Commission

LE:kt/LHE0336.PLE

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2247	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	15	86	Report
2166	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	0	0	0	Report
2245	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	0	0	0	Letter
2242	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	0	0	0	Letter
2240	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	0	0	0	Letter
2239	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	0	0	0	Letter
2233	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	0	0	0	Letter
2236	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	0	0	0	Letter
2235	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	0	0	0	Letter
2232	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	0	0	0	Letter
2207	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	0	0	0	Drawings
2264	8	Public Notices	UAD Public Comments By CTUIR	11	15	96	Comments
2265	8	Public Notices	UAD Public Comments By Karyn Jones	11	15	96	Comments
1729	8	Public Notices	"Your Opinion Counts!"-for 8/22-23/96 EQC Mtg	8	20	96	NewsAdv
1683	8	Public Notices	"Your Opinion Counts!"-Info Meeting Notice	8	17	96	NewsArt
1675	8	Public Notices	"Your Opinion Counts"-Info Meeting Notice	8	3	96	NewsArt
2263	8	Public Notices	UAD Public Comments 6/17/96-11/15/96	6	17	96	Comments
1565	8	Public Notices	Chance to Comment on Extension,Comment Period	6	17	96	ChnceCommnt
1566	8	Public Notices	Chance to Comment on Extension, Comment Period	6	17	96	NewsArt

2158	8	Public Notices	Umatilla Public Hearing, Tape 1, Hermiston	6	10	96	Cassette
2159	8	Public Notices	Umatilla Public Hearing, Tape 2, Hermiston	6	10	96	Cassette
2160	8	Public Notices	Umatilla Demilitarization Public Hearing Tape	5	29	96	Cassette
2161	8	Public Notices	Umatilla Demilitarization Public Hearing Tape	5	29	96	Cassette
2162	8	Public Notices	Umatilla Army Depot Public Hearing, Pendleton	5	13	96	Cassette
2262	8	Public Notices	UAD Public Comments 5/13/96-6/17/96	5	13	96	Comments
1447	8	Public Notices	Chance to Comments	4	5	96	NewsArt
1562	8	Public Notices	Chance to Comment on Findings and Risk Asses.	4	5	96	ChnceCommnt
1563	8	Public Notices	Chance to Comment on Proposed Haz Waste Permit	4	5	96	ChnceCommnt
1564	8	Public Notices	Chance to Comment on Proposed Air Quality Prmt	4	5	96	ChnceCommnt
1841	8	Public Notices	Fact Sheet for Draft HW Trtmnt & Storage Prmt	4	5	96	Fact Sheet
886	8	Public Notices	Treatment/Storage&Disposal Fac	0	0	0	MagArt
887	8	Public Notices	Closing of Fort McClellan	0	0	0	NewsArt
1966	9	Governor Corres.	Response to letter from JChien	11	8	96	Letter
1967	9	Governor Corres.	GDecker Response to Governors Letter 10/7/96	11	7	96	Letter
1968	9	Governor Corres.	Application Modification and Withdrawal	10	14	96	Letter
2095	9	Governor Corres.	Comments Regarding Chemical Depot	9	4	96	Letter
2110	9	Governor Corres.	Effectiveness of DEQ Staff	7	15	96	Letter
1964	9	Governor Corres.	Regarding Letter of Concerns Regarding Permits	6	28	96	Letter
1962	9	Governor Corres.	Regarding Letter of Concerns on Best Avail Tec	6	20	96	Letter
1963	9	Governor Corres.	Regarding Letter of Concerns on Best Avail Tec	6	20	96	Letter
1531	9	Governor Corres.	Rpt on Status of Umatilla Permitting Decisions	5	31	96	Memo
1792	9	Governor Corres.	Comments Regarding Public Hearing Process	5	30	96	Letter
1961	9	Governor Corres.	CTUIR Letter of 4/26/96 Regarding Proposed Umt	5	15	96	Letter
1960	9	Governor Corres.	Regarding Letter of Concerns for Health & Env.	5	2	96	Letter
1954	9	Governor Corres.	Concerns Regarding Releases by UCD	4	26	96	Letter
1955	9	Governor Corres.	Regarding Letter of Concerns on UCD for Alt Te	4	26	96	Letter
1956	9	Governor Corres.	Regarding Letter of Concerns of Accdntl Contam	4	26	96	Letter
1957	9	Governor Corres.	Regarding Letter for Opinions on Incineration	4	26	96	Letter
1958	9	Governor Corres.	Regarding Phone Call on Burning Toxic Chemical	4	26	96	Letter
1959	9	Governor Corres.	Regarding Letter of Concerns on Incineration	4	26	96	Letter
1851	9	Governor Corres.	5/21 Mtg of Umatilla CAC & Tour of Depot	4	24	96	Memo
1953	9	Governor Corres.	Storage of Nerve Agent Undesirable, Alt Needed	4	3	96	Letter
1952	9	Governor Corres.	Regarding Letter of Concerns for a Delay	3	25	96	Letter
1377	9	Governor Corres.	Regarding Letter Requesting Moratorium on App.	3	19	96	Letter
1378	9	Governor Corres.	Regarding Letter Regarding Delay for Permit Ap	3	19	96	Letter
1379	9	Governor Corres.	Regarding Letter of Concerns for Health & Env.	3	19	96	Letter
1380	9	Governor Corres.	Regarding Letter of Concerns for Health & Env.	3	19	96	Letter
1090	9	Governor Corres.	Move Forward with Incineration	3	13	96	Letter
1371	9	Governor Corres.	Comments to Not Delay the Permit Process	2	21	96	Letter
1951	9	Governor Corres.	Concerns for Enforcement of Env. Standards	1	22	96	Letter
83	9	Governor Corres.	Draft RCRA Munitions Rule	6	20	95	Letter
1950	9	Governor Corres.	Chemical Weapons Incineration at Umatilla	3	19	95	Memo
61	9	Governor Corres.	Responding to Letter on M-55 Rocket Stability	9	14	94	Letter
149	9	Governor Corres.	Prelim Rslt -Risk Reassessment Studies	8	19	94	Letter
227	9	Governor Corres.	Contract from Jeff Blackman	9	8	93	Request

228	9	Governor Corres.	Concerns About Proposed Incineration of Chem.	9	6	93	Letter
229	9	Governor Corres.	CDCAC Executive Order No. EO-93-10	8	6	93	Order
241	9	Governor Corres.	May 12 Public Forum	6	10	93	Letter
254	9	Governor Corres.	Contract from Victor Barnett	1	5	93	Request
291	9	Governor Corres.	Proposed Executive Order	4	8	91	Memo
447	9	Governor Corres.	Concern Safety of E. Oregon Communities	0	0	91	Letter
335	9	Governor Corres.	Tour JACADs	11	1	89	Letter
345	9	Governor Corres.	Cleanup of Contamination	7	28	89	Letter
374	9	Governor Corres.	DRAFT: Participants on ICCB	9	22	88	Letter
392	9	Governor Corres.	Concerns on Specific Environmental Assessment	3	2	88	Letter
399	9	Governor Corres.	Concerns on the Proposed Nerve Agent Demil.	12	18	87	Letter
403	9	Governor Corres.	Contractor Liability During Demil.	11	7	87	Letter
464	9	Governor Corres.	Regarding Letter of Concerns	6	3	86	Letter
2261	10	Correspondence	Public Comment Received Ater 11/15/96	11	18	96	Letter
2096	10	Correspondence	Transmittal of Public Comments	11	18	96	Memo
1976	10	Correspondence	Thank you to Professor Iisa For Dioxin Report	11	8	96	Letter
1971	10	Correspondence	Participant Info Request	11	8	96	Letter
2097	10	Correspondence	Agenda Item, ORS 466.055, and Agenda 11/14-15/	10	31	96	Fax
2098	10	Correspondence	Review of Meeting on 10-18	10	30	96	Letter
2099	10	Correspondence	Letter of Appreciation for DEQ Staff	10	24	96	Letter
1972	10	Correspondence	Transmittal of Documents	10	16	96	Memo
1973	10	Correspondence	Questions re: Separation of M55 Rockets	10	14	96	Fax
1838	10	Correspondence	NAC Permission to Photocopy 7 NRC Reports	10	9	96	Letter
1940	10	Correspondence	Request for Permission to Make 7 Copies NRC Rp	10	9	96	Fax/Memo
1845	10	Correspondence	Final UMCDF Phase 1 Quantitative Risk Assessmn	10	1	96	Memo
1846	10	Correspondence	Thank You To National Academy Press	10	1	96	Fax/Memo
1974	10	Correspondence	Permission to Make 15 Copies of NRC Report	10	1	96	Fax
1975	10	Correspondence	Request Permission to Make 15 Copies of NRC Rp	10	1	96	Fax/Memo
2100	10	Correspondence	Request for Information	9	23	96	Memo
1847	10	Correspondence	Response Letter to Wendell Ford	9	14	96	Letter
1760	10	Correspondence	Thank You For Your Comments Letter	9	11	96	Letter
1709	10	Correspondence	Requst to Review NRC Report on BAT for UMCDF	9	6	96	Letter
1710	10	Correspondence	Request for PAS Carbon Design Opinion for UMCD	9	6	96	Letter
1759	10	Correspondence	Invitation to The 2nd Env.Forum ChemWeapons...	8	28	96	Letter
1708	10	Correspondence	PMCD Memo Re: EQC Meeting 8/22/96	8	27	96	Memo
1796	10	Correspondence	Denver Dialogue, 7-10-96	8	26	96	Letter
1686	10	Correspondence	Permit Changes to CMassimino	8	21	96	Memo
1795	10	Correspondence	Transmittal of Umatilla Permit Information	8	12	96	Memo
1848	10	Correspondence	Secondary Chamber Feed for HD LIC Trial Burn	8	7	96	Letter
1794	10	Correspondence	Disposal of Chemical Agents & Munitions Stored	8	5	96	Letter
1632	10	Correspondence	Request for Attendance & Travel Cncrning UCD	8	2	96	Letter
1630	10	Correspondence	Request for Attendence & Travel Cncrning UCD	7	30	96	Letter
1631	10	Correspondence	Request for Attendence & Travel Cncrning UCD	7	30	96	Letter
1800	10	Correspondence	Disposal of ChemAgents at Umailla Depot Fnl EI	7	19	96	Letter
1707	10	Correspondence	Ford-Brown Chem Weapons Demil Amendment	7	17	96	Letter
1799	10	Correspondence	Thank You Letter to E&E	7	16	96	Letter

1671	10	Correspondence	Responding to Statements By Army Official	7	15	96	Letter
1797	10	Correspondence	Response letter for request from JHaley	6	28	96	Letter
1610	10	Correspondence	Thank you for Info on CSEPP Plan	6	26	96	Letter
1793	10	Correspondence	Transcript Review Consistant with Mtg. Notes	6	26	96	Letter
1609	10	Correspondence	Response to Comments Regarding Incineration	6	21	96	Letter
2101	10	Correspondence	Resume for Larry Baxter	6	20	96	Fax
1561	10	Correspondence	Transmittal of EQC Alt.Tech. Video	6	17	96	Memo
1608	10	Correspondence	Request for Complete Copy of Part A HW Appl	6	17	96	Letter
1560	10	Correspondence	Provision within AQ Rules Pertaining To Permit	6	14	96	Letter
1607	10	Correspondence	Comments in Response to 6/12/69 Editorial	6	14	96	Letter
1559	10	Correspondence	Response to DTweten's 6-6-1996 Letter	6	13	96	Letter
1558	10	Correspondence	Conversation w/Jim Long-Oregonian Reporter	6	4	96	Memo
1532	10	Correspondence	Transmittal of Cassettes Pub.Hearing 5/29/96	6	3	96	Memo
1849	10	Correspondence	Summary of Concerns Voiced at 5/29/96 Hearing	6	3	96	Memo
1530	10	Correspondence	Transmittal of UAD Air Dispersion Computr File	5	23	96	Memo
1529	10	Correspondence	Air Dispersion Modeling Files	5	22	96	Letter
1850	10	Correspondence	Request for Pre-Trial Burn RA Air Modeling Fil	5	20	96	Fax
1526	10	Correspondence	Umatilla Incineration Air Modeling Data Access	5	16	96	Memo
1527	10	Correspondence	Increase of Funds Available for Army Research	5	16	96	Memo
1528	10	Correspondence	Misinterpretation of MFurse Statement	5	16	96	Memo
1509	10	Correspondence	Transmittal of Umatilla Diskettes	5	8	96	Memo
1508	10	Correspondence	Transmittal of Requested Copies	5	6	96	Memo
1077	10	Correspondence	Responding to Letter of Concerns of Incineratn	5	6	96	Letter
1507	10	Correspondence	Transmittal of Umatilla Diskettes	4	26	96	Memo
1693	10	Correspondence	Responding to Letter of Concerns	4	24	96	Letter
1473	10	Correspondence	Fax Transmittal of North Carolina Study	4	23	96	Fax
1474	10	Correspondence	Agenda for Portland Mtg. 5/16/96	4	23	96	Fax
1472	10	Correspondence	Transmittal of Umatilla Diskettes	4	19	96	Memo
1471	10	Correspondence	UMCDF Part B Request for Additional Info	4	17	96	Letter
1470	10	Correspondence	JACADS Class 1 Permit Modification Denial	4	5	96	Letter
1469	10	Correspondence	Comments on Chance to Comments Sheets	4	4	96	Comments
1382	10	Correspondence	JACADS Class 2 Permit Modification Approval	3	27	96	Letter
1376	10	Correspondence	Permit Condition Modifications	3	19	96	Fax/Memo
1375	10	Correspondence	Opposition to UMCDF	3	16	96	Letter
1468	10	Correspondence	Comments on Revised EIS from Greenlaw	3	15	96	Comments
1373	10	Correspondence	Revised Draft EIS Comments	3	14	96	Letter
1374	10	Correspondence	EPA Involvement in UMCDF Permitting Decision	3	14	96	Letter
1381	10	Correspondence	EPA Involvement in UMCDF Permitting Decision	3	14	96	Letter
1211	10	Correspondence	JACADS Class 2 Permit Modification Approval	3	12	96	Letter
1209	10	Correspondence	Transmittal of Diskette w/Draft UMCDF Permit	3	11	96	Memo
1210	10	Correspondence	Transmittal of Diskette	3	11	96	Memo
1208	10	Correspondence	Transmittal of Umatilla Draft Permit w/Notes	3	8	96	Memo
1467	10	Correspondence	Sumps Classified As Non-RCRA TOCDF	2	29	96	Letter
1372	10	Correspondence	Dedication for Army Outreach Office	2	28	96	Letter
1155	10	Correspondence	Response to Request for One-Year Moratorium	2	23	96	Letter
1204	10	Correspondence	Request to Review WAP	2	14	96	Fax

1053	10	Correspondence	Request for Information	1	27	96	Letter
1188	10	Correspondence	Re: Change in ODEQ Haz Waste Program	1	22	96	Letter
1050	10	Correspondence	JACADs Class One Modification Notices	1	11	96	Letter
1051	10	Correspondence	JACADs RD&D Permit Application	1	11	96	Letter
1048	10	Correspondence	JACADs Class One Modification Notice	1	10	96	Letter
1049	10	Correspondence	JACADs Class One Modiciation Approval	1	10	96	Letter
1052	10	Correspondence	JACADS Class One Modification Approval	1	10	96	Letter
1186	10	Correspondence	Transmittal of Risk Assessment Documents	1	1	96	Memo
1036	10	Correspondence	Letter Sent with Preliminary Draft Permit	12	29	95	Letter
1035	10	Correspondence	Transmittal of Draft Umatilla Chem Demil Prmt	12	27	95	Memo
74	10	Correspondence	JACADS Class 1 Permit Modification Rejection	12	14	95	Letter
1203	10	Correspondence	JACADS Class 2 Permit Modification Request	11	27	95	Letter
1156	10	Correspondence	Response to Risk Assess. Storage Biggest Rsk	11	2	95	Letter
1466	10	Correspondence	Problems Discovered During LIC & DFS Trl Brns	10	31	95	Letter
1201	10	Correspondence	JACADS 14 Class 2 Permit Modification Proposal	10	26	95	Letter
1202	10	Correspondence	JACADS Class 1 Permit Modification Submittals	10	16	95	Letter
75	10	Correspondence	Letter Sent to Morrow County Re: Mtg. Arrngmnt	8	28	95	Memo/Fax
76	10	Correspondence	Revised Scope From Contractors	8	25	95	Memo
1465	10	Correspondence	Information From Agent Monitoring Meeting	8	25	95	Memo
77	10	Correspondence	CTUIR Comments on Draft Pre-Trial Burn RA	8	22	95	Letter
1157	10	Correspondence	JACADS Class 1 Permit Mod.Submittals	8	17	95	Letter
78	10	Correspondence	Qualitative Risk Assessment Contacts	8	11	95	Fax
79	10	Correspondence	Umatilla Project Activities at Hermiston Offic	8	8	95	Memo
80	10	Correspondence	JACADs-Army Application for a New Permit	8	1	95	Letter
81	10	Correspondence	JACADS Permit Application Review	7	19	95	Memo
82	10	Correspondence	Pre-Proposed Munitions' Rule	6	21	95	Letter
84	10	Correspondence	Use of STEL or TLV-TWA or Ceiling Limits	6	19	95	Letter
85	10	Correspondence	Performance Evaluation Report	5	24	95	Memo/Fax
86	10	Correspondence	E&E Access to Depot	5	24	95	Letter
87	10	Correspondence	Conforth Ranch as Game Reserve	5	15	95	Memo/Fax
88	10	Correspondence	TOCDF Medical Forms	5	12	95	Memo/Fax
89	10	Correspondence	Closing of Ft. McClellan	5	9	95	Letter
90	10	Correspondence	OR/US Army Cooperative Agreement	5	1	95	Letter
91	10	Correspondence	CSEPP Reentry Restrtn Matrl	4	28	95	Memo
92	10	Correspondence	Inspection of Tooele Depot	4	17	95	Letter
93	10	Correspondence	RCRA Permit Application	4	14	95	Letter
94	10	Correspondence	Chem Agent Stockpile Incin.	3	24	95	Letter
95	10	Correspondence	GAO Letter, Budget Estimates Weapons Dest.	3	17	95	Letter
96	10	Correspondence	Incineration of Stockpile	3	8	95	Letter
97	10	Correspondence	Permit Application, 5X,3X	3	8	95	Memo/Fax
98	10	Correspondence	Class 2 Permit Modification	3	6	95	Letter
99	10	Correspondence	Meteorological Monitring Plan	2	28	95	Letter
100	10	Correspondence	Class 2 Permt Modifictn, JACADS	2	28	95	Letter
101	10	Correspondence	Proposal Being Postponed	2	27	95	Letter
102	10	Correspondence	Meeting at Umtlla Co. Emer.	2	24	95	Letter

448	10	Correspondence	Comments on Applctn by Army for Permit Mod	2	23	95	Letter
103	10	Correspondence	Check Acc., Commission Mtgs.	2	22	95	Memo
104	10	Correspondence	Mtg. at Lutheran Church	2	20	95	Letter
1034	10	Correspondence	Narrtve Postn Descrptns Demil Project	2	8	95	Memo
1637	10	Correspondence	UMDA Meteorological Station Systems Audit	2	1	95	Letter
105	10	Correspondence	Extension Granted to Army-NOD	1	24	95	Letter
106	10	Correspondence	GAO Report on Chemical Weapons	1	13	95	Memo/Rpt
107	10	Correspondence	Approval Resp. Extension NOD#5	12	22	94	Letter
108	10	Correspondence	FEMA Agreement EMS-94-K-0327	12	22	94	Letter
109	10	Correspondence	Update on Workplan	12	16	94	Memo/Fax
110	10	Correspondence	Solicit Input Army's Criteria	11	23	94	Letter
111	10	Correspondence	Permit Review	11	22	94	Letter
112	10	Correspondence	HW Compliance Inspection	11	21	94	Letter
113	10	Correspondence	Update on Response to NOD	11	20	94	Letter
114	10	Correspondence	Meeting Notice for Open House	11	16	94	Notice
115	10	Correspondence	Meteorological Monitoring Plan	11	15	94	Letter
116	10	Correspondence	PAS Air Filter System	11	14	94	Letter
117	10	Correspondence	Site Visit @ MD, UT, & OR	11	4	94	Letter
118	10	Correspondence	Transmittal of Documents	11	4	94	Memo
119	10	Correspondence	Met Station Information Update	11	1	94	Memo
120	10	Correspondence	Upcoming DEQ Open House	11	1	94	Letter
121	10	Correspondence	Risk Assumptions Proposal	10	31	94	Fax/Memo
122	10	Correspondence	Address as Follow	10	26	94	Fax
123	10	Correspondence	Nov Emergency Board Letter	10	26	94	Fax
124	10	Correspondence	Weapons Destrctn Prog. Report	10	21	94	Letter
125	10	Correspondence	WkGrp Rev-Eval of Method 0010	10	17	94	Letter
126	10	Correspondence	DEQ Open House in Hermiston	10	17	94	Memo
127	10	Correspondence	EPA - US ARMY Meeting Outline	10	11	94	Outline
128	10	Correspondence	UT-DEQ Risk Assessment Status	10	11	94	Letter
129	10	Correspondence	Demil Cit Adv Comm Period Extn	10	11	94	Letter
130	10	Correspondence	DOA Concerns Chem Demil Prmt	10	11	94	Memo
131	10	Correspondence	On-Site Meteorological Station	10	10	94	Fax/Memo
132	10	Correspondence	Bullet Summary of Fed FY 95	10	5	94	Fax/Memo
133	10	Correspondence	Site Visits, Questions, Pine Bluff	10	5	94	Letter
134	10	Correspondence	Supplemental RI Study Sites	10	4	94	Letter
135	10	Correspondence	Comment-60% Remedial Design	9	28	94	Memo
136	10	Correspondence	Two Regulations Attached	9	21	94	Fax/Memo
137	10	Correspondence	Technical Conference	9	20	94	Flyer
138	10	Correspondence	Draft Notes Meeting on ANCDF	9	20	94	Memo
139	10	Correspondence	Interview with Steve Jones	9	20	94	Stment
140	10	Correspondence	Recent Study of M-55 Rocket	9	14	94	Letter
141	10	Correspondence	Response to Info Request Lettr	9	14	94	Letter
142	10	Correspondence	Request for Ext to Resp to NOD	9	9	94	Letter
143	10	Correspondence	Request for Ext to Resp to NOD	9	9	94	Letter
144	10	Correspondence	Follow-up / Subcommittee Wkgrp	9	8	94	Letter

145	10	Correspondence	Draft Risk Assessment-Anniston	8	30	94	Letter
146	10	Correspondence	Remedial Design Reports	8	29	94	Letter
147	10	Correspondence	Draft Cooperative Agreement	8	24	94	Letter
148	10	Correspondence	Mailing List for Umatilla	8	22	94	Letter
150	10	Correspondence	What if the DEQ & EPA issue a Final Permit?	8	12	94	Fax
151	10	Correspondence	Fact Sheets	8	9	94	Letter
152	10	Correspondence	Ext to Submit Resp to NOD #5	8	8	94	Letter
153	10	Correspondence	Response to USACMDA-HW Permit	8	8	94	Letter
154	10	Correspondence	Activity Summary	8	4	94	Letter
155	10	Correspondence	Validation Testing by RADIAN	8	3	94	Fax
156	10	Correspondence	RCRA Comments on Umatilla RODs	8	3	94	Memo
157	10	Correspondence	ADA Operable Unit Workplan	8	1	94	WkPlan
158	10	Correspondence	Carbon Filter System Summary	7	29	94	Letter
180	10	Correspondence	Items for Review/Files	7	29	94	Memo
159	10	Correspondence	Affitional Comments from Peer Review	7	28	94	Fax
160	10	Correspondence	Phone Conv - Risk Analysis	7	28	94	Memo
161	10	Correspondence	Records fo Decisions- Signed	7	27	94	Letter
162	10	Correspondence	Preliminary Rslt-RADIAN's Test	7	26	94	Fax
163	10	Correspondence	Task Order No. 64-93-10	7	25	94	Letter
164	10	Correspondence	Technical Conference	7	25	94	Letter
165	10	Correspondence	Public Assessment Survey/draft	7	6	94	Fax
166	10	Correspondence	Notification to Update Permit	7	5	94	Letter
167	10	Correspondence	2 Proposed Records of Decision	6	30	94	Memo
168	10	Correspondence	Testimony Before Senate Interim	6	29	94	Testimny
169	10	Correspondence	Ext Request Resp NOD #5 Delay	6	28	94	Memo
170	10	Correspondence	Systemization Process - Tooele	6	24	94	Letter
171	10	Correspondence	"Permitting Fact Sheet Draft 2	6	23	94	E-Mail
172	10	Correspondence	Miscellaneous Umatilla Issues	6	23	94	E-Mail
173	10	Correspondence	Risk Assessment Meeting	6	21	94	Notes
174	10	Correspondence	Meeting Notes-Advisory Comm	6	21	94	E-Mail
175	10	Correspondence	Risk Assessment Meeting	6	17	94	Fax/Agnda
176	10	Correspondence	Comments on Draft Fact Sheet#2	6	10	94	Memo
177	10	Correspondence	Selection of CDCAC Chairperson	6	9	94	Letter
178	10	Correspondence	GB Rocket Fire Incident Report	6	8	94	Letter
179	10	Correspondence	RCRA & Air Emissions Issues	6	7	94	Letter
181	10	Correspondence	Indirect HRA for TOCDF	5	26	94	Letter
182	10	Correspondence	Agency Reorganization	5	26	94	Letter
183	10	Correspondence	NOD Cover Letter	5	19	94	Memo
184	10	Correspondence	HW Permitting Status	5	13	94	Memo
185	10	Correspondence	Chem Demil Mtg/ Draft Comments	5	11	94	Memo
186	10	Correspondence	Chem Demil Mtg/ Draft Comments	5	6	94	Memo
187	10	Correspondence	Activity Summary	5	3	94	Letter
188	10	Correspondence	Cooperative Agreement/draft	4	29	94	Letter
189	10	Correspondence	List of References	4	28	94	Memo
190	10	Correspondence	Demil Permit Processing Mtg	4	20	94	Outline
191	10	Correspondence	Carbon Filter Sys Perf Rpt-Rev	4	19	94	Letter

192	10	Correspondence	Comments on 5X Test Plan	4	15	94	Letter
193	10	Correspondence	Assessment of Alt. Tech. Rprt	4	12	94	Letter
194	10	Correspondence	ADA at Umatilla Depot	4	12	94	E-Mail
195	10	Correspondence	UAD Budget Meeting	3	29	94	E-Mail
196	10	Correspondence	GB Release from the Common Stack	3	23	94	Report
197	10	Correspondence	NOD #5	3	15	94	Letter
18	10	Correspondence	Response to US Army's Plan to Incinerate	3	14	94	Letter
198	10	Correspondence	DEQ's Comments for the USACMDA	3	11	94	Memo
199	10	Correspondence	Follow-up Phone Convrstn w/ TMiller	3	3	94	Letter
200	10	Correspondence	Proposed Cleanup Plans Mtg	3	2	94	Agenda
201	10	Correspondence	Annual HW Generation Report	2	23	94	Letter
202	10	Correspondence	Chem Demil Cit Adv Comm Mtg	2	13	94	Fax/Agenda
203	10	Correspondence	EPA's Response to the NRC Report	2	9	94	E-Mail
204	10	Correspondence	Comments on the Exec Summary	2	9	94	Notes
205	10	Correspondence	NRC Report, review, comments	2	9	94	E-Mail
206	10	Correspondence	CEPPO Risk Mgmt Planning	2	7	94	Message
207	10	Correspondence	Chem Demil Cit Adv Comm Mtg	2	5	94	Fax/Agenda
208	10	Correspondence	Rev Com CSDP Air Filter Design	2	3	94	Memo
209	10	Correspondence	Permit Appl Review-3rd NOD	1	25	94	Letter
210	10	Correspondence	UAD Committee Follow-up	1	22	94	E-Mail
211	10	Correspondence	Umatilla Funding	1	21	94	E-Mail
212	10	Correspondence	UAD Citizens Advisory Comm	1	12	94	E-Mail
213	10	Correspondence	Chem Demil Cit Adv Comm/Roster	12	16	93	List
214	10	Correspondence	Notes from Umatilla Meeting	12	10	93	E-Mail
215	10	Correspondence	Overview of the COMPDEP Model	12	9	93	Notes
216	10	Correspondence	Facility Proj Management Plan	12	1	93	Memo
217	10	Correspondence	RCRA & Air Permit Applications	11	10	93	Letter
218	10	Correspondence	Chem Demil Wrkgrp Conf Call	11	9	93	E-Mail
219	10	Correspondence	Advisory Committee	11	9	93	E-Mail
220	10	Correspondence	CSEPP Fact Sheet	10	25	93	Memo
221	10	Correspondence	1992 TSDF Billing	10	13	93	E-Mail
222	10	Correspondence	Umatilla Conference Call	10	6	93	E-Mail
224	10	Correspondence	Public Info. Materials Requested	9	30	93	Letter
225	10	Correspondence	Current Stckples Deteriorating	9	23	93	Letter
226	10	Correspondence	Current Stckples Deteriorating	9	23	93	Letter
230	10	Correspondence	Statute Trtmnt Strge Disposal	8	13	93	Letter
231	10	Correspondence	Dioxin Emission Limits	8	11	93	Memo
232	10	Correspondence	EPA in Surrogate Trial Burn	8	9	93	Letter
233	10	Correspondence	Cost Pricing Proposals	8	5	93	Letter
234	10	Correspondence	Original Cooperative Agreement	7	22	93	Letter
235	10	Correspondence	Destroy Stockpile of Obsolete Chemicals	7	7	93	Letter
236	10	Correspondence	UAD - Cit Adv Comm	6	30	93	Memo
237	10	Correspondence	Notice of Permit App Defcncy	6	29	93	Letter
238	10	Correspondence	UMCDF Second NODs	6	22	93	Memo
239	10	Correspondence	Concerned Citizen, Nerve Gas	6	17	93	Letter
240	10	Correspondence	Destroy Stockpile	6	10	93	Letter

242	10	Correspondence	Chronology of the Project	6	4	93	Letter
243	10	Correspondence	Chem Weap Demil&Dis:GB&VX Camp	5	12	93	Overview
244	10	Correspondence	Request for Info.on Demil	5	5	93	Letter
245	10	Correspondence	NOD	4	21	93	Letter
246	10	Correspondence	Umatilla NOD Transmittal	4	11	93	Fax/Memo
247	10	Correspondence	Incinerator Project Status	3	29	93	Report
248	10	Correspondence	RCRA Deact Furnce Waste Drums	3	5	93	Mmo/Fax
249	10	Correspondence	Governor Authorization of CAC	2	22	93	Memo
250	10	Correspondence	Chronology of Project	1	22	93	Letter
251	10	Correspondence	List of Hazardous Substances	1	13	93	Letter
252	10	Correspondence	CSEPP	1	13	93	Letter
253	10	Correspondence	OVT at the JACADS	1	13	93	Memo
255	10	Correspondence	Project Status & Issue Report	1	3	93	Report
256	10	Correspondence	Finding Funds 4 Tribe Involvmnt	11	30	92	E-Mail
257	10	Correspondence	Met Station	11	20	92	E-Mail
258	10	Correspondence	Open Burning/Open Detonatn Pit	11	20	92	E-Mail
446	10	Correspondence	Chem Stckpl Disp Sys	11	4	92	Review
259	10	Correspondence	Sumbittal of Clsre Pln, Phone	10	2	92	Summary
1031	10	Correspondence	RCRA Trial Burn for Liquid Incin.	10	1	92	Letter
260	10	Correspondence	NOD	9	10	92	Letter
261	10	Correspondence	Fee Adjustment	8	25	92	Letter
262	10	Correspondence	Review & Comments Review	8	22	92	Letter
263	10	Correspondence	Wipe Testing for Furnace	7	21	92	Chart
264	10	Correspondence	Clean-up/Closure	7	20	92	E-Mail
265	10	Correspondence	June 1992 RCRA Closure Plan	7	7	92	Memo
266	10	Correspondence	Cleanup of Popping Furnace	7	7	92	E-Mail
267	10	Correspondence	Revised Schedule for Clsre Doc.	5	8	92	Letter
268	10	Correspondence	Metereorological Monitoring Station Setting	4	1	92	Report
269	10	Correspondence	Public Meeting	3	18	92	E-Mail
270	10	Correspondence	Postpone Clsre Pln, Phone Use	3	3	92	Summary
271	10	Correspondence	Correction of Address	2	11	92	Letter
272	10	Correspondence	IRZ\PAZ Population	2	6	92	Memo
273	10	Correspondence	Nerve Agent Incin. Questions	1	30	92	Letter
274	10	Correspondence	Incineration Project	1	21	92	E-Mail
275	10	Correspondence	Dept. Position on Cndcting brn	1	10	92	Letter
276	10	Correspondence	Agencies Final Comments on Part B Permit	1	2	92	Memo
277	10	Correspondence	Comments on Draft NOD	12	5	91	Memo
278	10	Correspondence	Changing Furnace Burnout Proc	11	22	91	Letter
279	10	Correspondence	Burnout Rationale	11	13	91	Fax/Letter
280	10	Correspondence	Air Contaminant Dschrge Prmt	10	22	91	Letter
281	10	Correspondence	Amendment to Closure Plan	10	22	91	Letter
282	10	Correspondence	Burnout & Removal of Furnace	9	30	91	Memo
283	10	Correspondence	EMSL TA for XRF	8	5	91	Letter
284	10	Correspondence	Land Use Compatibility Statmnt	7	31	91	Trnsmttl
285	10	Correspondence	Ancillary Support Projects	6	5	91	Letter
286	10	Correspondence	Ancillary Support Construction	5	27	91	Letter

287	10	Correspondence	Air Contaminant Discharge	5	23	91	Letter
288	10	Correspondence	JACADs Trl Brn POHCs Dcn Soltn	5	9	91	Memo
289	10	Correspondence	Air Containment, Air Pollutn	5	6	91	Letter
290	10	Correspondence	NON, installation of Tank	4	16	91	Letter
292	10	Correspondence	JACADS Liquid Injection	3	4	91	Memo
293	10	Correspondence	Part B HW, Offcr of Installtn	2	21	91	Letter
294	10	Correspondence	Signatories on RCRA Permit	1	28	91	Letter
295	10	Correspondence	Lbility Fed Gov Question	12	13	90	Memo
296	10	Correspondence	Fed gov Lblty, Umatilla	12	4	90	Letter
297	10	Correspondence	Umatilla Depot Incinerator	11	19	90	Memo
298	10	Correspondence	Part B Application Change	11	5	90	Letter
299	10	Correspondence	Umtla Dpt Incin., Pblc Prtctn	10	29	90	Letter
300	10	Correspondence	Changes to RCRA Part B Permit	10	17	90	Letter
301	10	Correspondence	RCRA Prmt App CSDP	10	9	90	Letter
302	10	Correspondence	Permit App UMDA	10	5	90	Letter
303	10	Correspondence	Sampling Plan UAD Closure Plan	9	26	90	Summary
304	10	Correspondence	Approval of UAD Closure Plan	9	18	90	Summary
305	10	Correspondence	RCRA Permit Appl Enclosed	8	27	90	Letter
306	10	Correspondence	Visit to JACADs	8	23	90	Transmttl
307	10	Correspondence	Request of OR Emerg. Mngment	8	21	90	E-Mail
308	10	Correspondence	Amendment to Closure Plan	7	26	90	Letter
309	10	Correspondence	Revisions to Closure Plan	7	26	90	Letter
310	10	Correspondence	Addendum to UMDA Furnace Clsre	6	29	90	Letter
311	10	Correspondence	RCRA/$Fund Overlap	6	27	90	Memo
312	10	Correspondence	Issues to be Solved in Closure	6	11	90	Letter
313	10	Correspondence	US - Soviet Weapons Reduction	6	6	90	Memo
314	10	Correspondence	Popping Furnace Closure Schdl	5	22	90	Memo
315	10	Correspondence	Followup Info. from Phone Conversation	5	15	90	Letter
316	10	Correspondence	4/10/90 National ICCB Meeting	5	9	90	Transmittal
317	10	Correspondence	Conference call Chem Warfare Agent	4	20	90	Memo
318	10	Correspondence	UAD Popping Furnace ClosurePln	4	18	90	Letter
319	10	Correspondence	Revised CSDP Schedules	4	17	90	Memo
320	10	Correspondence	National ICCB Meeting	4	10	90	Memo
321	10	Correspondence	ICCB Meeting attendance	3	28	90	Transmittal
322	10	Correspondence	JACADs RCRA Permit	3	15	90	Memo
323	10	Correspondence	Revised Closure Plan for Deactvtn Furnance	3	9	90	Letter
324	10	Correspondence	Tank Integrity Assessment	3	6	90	Letter
397	10	Correspondence	DEQ included in Committee	3	6	90	Letter
325	10	Correspondence	RCRA Permit Document Request	2	12	90	Letter
326	10	Correspondence	RCRA Part B App. changes Requested	2	9	90	Letter
327	10	Correspondence	Phone Use Rpt, Info Closure Plan	1	17	90	Summry
328	10	Correspondence	Compliance Order HW-ER-89-67	1	5	90	Letter
329	10	Correspondence	Small-arms Firing Range	12	18	89	Letter
330	10	Correspondence	Deactivation Furnace Closure	12	1	89	Letter
331	10	Correpsondence	UST Leak Testing Certification	11	17	89	Letter
332	10	Correspondence	Telephone/Fax #'s for POCs	11	14	89	Memo/Fax

333	10	Correspondence	Certifications & Tank Integrity	11	3	89	Letter
334	10	Correspondence	Deny RCRA Permit	11	1	89	Letter
336	10	Correspondence	Notice of Final Determination	11	1	89	Agremnt
337	10	Correspondence	Tooele Prmt Word Disks	10	19	89	Memo
338	10	Correspondence	Permits/AQ, HW & RCRA Part B	10	4	89	Memo
339	10	Correspondence	Deadline Extension-Thank You	9	28	89	Letter
340	10	Correspondence	Interagency Agremnt for UAD	9	19	89	Memo
341	10	Correspondence	Interagency Agreement	9	19	89	Letter
342	10	Correspondence	Deadline Extension-Granted	9	14	89	Letter
343	10	Correspondence	Apprval of Schedule for Tank	9	8	89	Letter
344	10	Correspondence	Proposed RCRA Permit Denial	8	30	89	Letter
346	10	Correspondence	Deactivation Furnance	7	7	89	Fax
347	10	Correspondence	APE 1236 Deactivation Furnace	5	25	89	Letter
348	10	Correspondence	Umatilla IAG	5	25	89	Letter
349	10	Correspondence	Remdl Invest. of Explsv Wshout	5	11	89	Letter
350	10	Correspondence	Addt'l Requirements for Incin.	4	21	89	Letter
351	10	Correspondence	Nrve Agnt Incin. HW Facility	4	17	89	Intrmemo
352	10	Correspondence	Mailing List for HW Incin Prmts	3	15	89	Letter
353	10	Correspondence	Incenerator Project	3	8	89	Letter
354	10	Correspondence	RCRA Part B Completion	3	8	89	Letter
355	10	Correspondence	Conference Call on 03-06-89	2	28	89	Memo
356	10	Correspondence	Incin. Final Operating Permits	2	27	89	Letter
357	10	Correspondence	Notice of Deficiency Warning	2	12	89	Report
358	10	Correspondence	Cooperating Agencies Meeting	2	10	89	Letter
359	10	Correspondence	Review of DOD's Instruction	2	2	89	Letter
360	10	Correspondence	Public Scoping Meeting	2	2	89	Letter
361	10	Correspondence	RCRA Part B - OB/OD UMDA	1	23	89	Memo
362	10	Correspondence	USTs at Umatilla	1	17	89	E-Mail
363	10	Correspondence	OB/OD Completeness	1	9	89	Letter
364	10	Correspondence	OB/OD Completeness Check, Phone	1	6	89	Summary
365	10	Correspondence	Permitting Info. & Nonprmtting	1	3	89	Memo
366	10	Correspondence	Tooele Part B Review Spprt Doc	12	29	88	Memo
367	10	Correspondence	Completeness Review (Part B)	12	29	88	Letter
368	10	Correspondence	Popping Furnace Deadline Appl	12	20	88	Memo
369	10	Correspondence	Revw of RCRA Permit App.	12	20	88	Memo
370	10	Correspondence	Popping Furncace & OB/OD Act	12	2	88	Letter
371	10	Correspondence	CSDR Team EPA/State Review	11	28	88	Notes
372	10	Correspondence	CSDP Tentative RCRA review	11	3	88	Schedule
373	10	Correspondence	Incomplete Applications	9	30	88	Letter
375	10	Correspondence	Proposed Nerve Agent Inc Wkgrp	9	16	88	Letter
376	10	Correspondence	Proposed Nerve Agent Inc Wkgrp	9	16	88	Letter
377	10	Correspondence	Funding Request-Director's Ltr	9	15	88	Memo
378	10	Correspondence	Thank You Letter to FHanson	8	26	88	Letter
379	10	Correspondence	Deactivation Furnace Upgrade	8	24	88	Fax
380	10	Correspondence	OAR for Aquatic Toxicity Test	8	19	88	Letter
381	10	Correspondence	Appoint two Representatives	8	18	88	Letter

382	10	Correspondence	Local Intergov't Consultion Board	8	12	88	MemoLttr
383	10	Correspondence	Inspection Visit	7	6	88	Memo
384	10	Correspondence	Full-Time Person Needed	6	30	88	Letter
385	10	Correspondence	Disposal of Nerve Agents	6	30	88	Letter
386	10	Correspondence	Final Minutes to 2-18-88 mtg	6	17	88	Memo
387	10	Correspondence	Installation Restoration Program Plan	6	10	88	Letter
388	10	Correspondence	Invite to Inspection	5	16	88	Memo
389	10	Correspondence	Conference Call and Info.	5	9	88	Memo
390	10	Correspondence	Permitting of Popping Furnace	4	11	88	Memo
391	10	Correspondence	Review Comments from -	3	24	88	Letter
393	10	Correspondence	Army ROD & Permit Schedules	3	2	88	Memo
394	10	Correspondence	Emergency Response Concept Plan	2	24	88	Letter
395	10	Correspondence	Disposal of Chemical Munitions	2	17	88	Letter
396	10	Correspondence	EPA Review of CDC Proposal	2	1	88	Letter
398	10	Correspondence	Nonrequirement of Permit	12	30	87	Letter
400	10	Correspondence	Incinerability of Impurities	12	16	87	Memo
401	10	Correspondence	Emmisions Test Report for CAMDs	12	14	87	Report
402	10	Correspondence	Pasadena,CA CAD Workgroup Mtg	11	12	87	Notes
404	10	Correspondence	Protecting Public Health	11	6	87	Notes
405	10	Correspondence	Demil of Nerve Agent Concerns	10	28	87	Memo
406	10	Correspondence	Meeting w/Army, 11/12-13/87	10	16	87	Memo
407	10	Correspondence	Materials on Perceived Rsk	10	8	87	Letter
408	10	Correspondence	Tooele Report & NOD Comparison	10	6	87	Letter
409	10	Correspondence	Released Reports on Incidents CAMD	10	5	87	Memo
410	10	Correspondence	Interim Safety Report	10	2	87	Letter
411	10	Correspondence	Mailing List Addition	9	23	87	Letter
412	10	Correspondence	Nerve Agent Incidents Reports	9	22	87	Memo
413	10	Correspondence	Protecting Public Health	9	16	87	Notes
414	10	Correspondence	Chem Incid. JACADs, CAMDs Toole	9	10	87	Memo
415	10	Correspondence	Final RCRA Fac. Investigation	7	27	87	Report
416	10	Correspondence	Emission & Exposure Levels	7	23	87	Memo
417	10	Correspondence	Schedule for Mtg. Aug. 5	7	21	87	Letter
418	10	Correspondence	Nerve Gas Demilitarization Note	7	8	87	Notes
419	10	Correspondence	Mailing List	6	30	87	Memo
420	10	Correspondence	Barry J Davis, Hearing	6	4	87	Tstmny
421	10	Correspondence	UAD Events Schedule Nrve Incin	6	0	87	Schdle
422	10	Correspondence	Workgroup for EIS	5	13	87	Letter
423	10	Correspondence	SWMU Investigation Meeting Sum	5	11	87	Transmittal
424	10	Correspondence	Igloo Monitoring	5	8	87	Letter
425	10	Correspondence	Procsing Fee HW Incin App	4	24	87	TransAdv
426	10	Correspondence	Incinerator Prmt Act Schedule	4	15	87	Memo
427	10	Correspondence	CDC Mtg, Safe Expsre Levels	4	9	87	Letter
428	10	Correspondence	Health Aspects of Emerg. Rspnse	4	8	87	Letter
429	10	Correspondence	Register Community Position	4	7	87	Letter
430	10	Correspondence	Response to House of Rep Lttr	3	31	87	Letter
431	10	Correspondence	Invstgtn Prpsl Unaccptble	3	23	87	Letter

432	10	Correspondence	Chem. Weapns disposal, mtg	3	23	87	Letter
433	10	Correspondence	Wrkgrp Cnfrnce Call, Trail Burn	3	23	87	Letter
434	10	Correspondence	Participation in Pblc Hearing	.3	18	87	Letter
435	10	Correspondence	Addt'l Info to Hearing	3	16	87	Letter
436	10	Correspondence	3/25-27 Mtg. RCRA Prmts Demil	3	10	87	Memo
437	10	Correspondence	Confidentlty Claim Convstn	3	6	87	Letter
438	10	Correspondence	Analysis of Database	3	6	87	Memos
439	10	Correspondence	Investigation Report Chem Incident	3	4	87	Report
440	10	Correspondence	Disposal of Lethal Chem Agents	2	4	87	Letter
441	10	Correspondence	Briefing Concrning GB Release	2	4	87	Memo
442	10	Correspondence	DOD Draft Instruction Comments	1	14	87	Memo
443	10	Correspondence	Response to October 2, 1986	1	12	87	Letter
444	10	Correspondence	Review of Attachment D-2	1	5	87	Memo
445	10	Correspondence	NOD Tooele South CSD	1	5	87	Letter
449	10	Correspondence	Groundwater Monitoring	12	11	86	Letter
450	10	Correspondence	Revised "Model" NOD	12	10	86	Memo
451	10	Correspondence	CDC Exposure Limit/draft	12	8	86	Letter
452	10	Correspondence	Notes from Phone Conversation	12	2	86	Notes
453	10	Correspondence	HW Print Fee	11	17	86	Memo
454	10	Correspondence	Conf Call on NOD for Demil Inc	11	14	86	Memo
455	10	Correspondence	"Model" NOD	11	7	86	Memo
456	10	Correspondence	Fed. Facilities Compliance	9	23	86	Letter
457	10	Correspondence	Draft Prgrammtc Env. Impct	9	23	86	Letter
458	10	Correspondence	RCRA Part B Permit	9	18	86	Letter
459	10	Correspondence	Secrecy Agreement	8	29	86	Agreemnt
460	10	Correspondence	HW Inventory of Sites	8	5	86	Letter
461	10	Correspondence	Federal Fac Compliance Issues	7	9	86	Memo
462	10	Correspondence	Proposed Chem Agent Inc Meetng	6	12	86	Letter
463	10	Correspondence	Formation of Prmt Wrtr Wrkgrp	6	6	86	Memo
465	10	Correspondence	Storage/Trtmnt/Disp - GB,VX,HD	4	18	86	Memo
466	10	Correspondence	Mandating Disposal Stckple	3	28	86	Letter
467	10	Correspondence	Army Concept Plan Briefing	3	24	86	Letter
468	10	Correspondence	"Environmental Significance"	11	13	85	Memo
469	10	Correspondence	NOV Response	10	29	85	Letter
470	10	Correspondence	DOD RCRA Incineration Issues	10	25	85	Memo
471	10	Correspondence	Requirements for Inspectors	10	17	85	Letter
472	10	Correspondence	What to do w/HW at the Depot	10	17	85	Memo
473	10	Correspondence	Quarterly Rprt of HW Storage	10	17	85	Memo
474	10	Correspondence	Information Sheet	10	10	85	Letter
475	10	Correspondence	Response to NOV	9	23	85	Letter
476	10	Correspondence	Request Furnsh Delvry Status	8	15	85	Letter
477	10	Correspondence	Attachment 2, Part B Checklist	7	22	85	Chcklist
478	10	Correspondence	Signatories to DOD Prmt Appl	7	3	85	Letter
479	10	Correspondence	Consent Agreement& Final Order	6	24	85	Letter
480	10	Correspondence	Consent Agreement & Fnl Order	6	10	85	Letter
481	10	Correspondence	Prog Implementation Gudnc Syst	2	11	85	Memo

482	10	Correspondence	M55 Chemical Rockets Storage	2	4	85	Letter
483	10	Correspondence	Notes of RCRA Methods & QA Act	2	1	85	Memo
484	10	Correspondence	Last 6 mo Summary on GB & VX	12	14	84	Letter
485	10	Correspondence	Disposal of M55 Rockets	6	18	84	Letter
486	10	Correspondence	Proposed Annual License Fee	3	11	83	Letter
487	10	Correspondence	Rescinding Permit Action	4	10	81	Letter
488	10	Correspondence	Proposed Meterological Data	0	0	0	Fax
489	10	Correspondence	Nerve Agnt Incin. Proj. Status	0	0	0	Report
1655	12	Other State Docs	Public request for comments from ADEM	11	8	96	PubNotice
1654	12	Other State Docs	ADEM Completeness letter	11	7	96	Letter
1425	12	Other State Docs	TOCDF Compliance	11	1	96	Letter
1423	12	Other State Docs	Requesting written opinion of TOCDF compliance	10	17	96	Letter
1422	12	Other State Docs	JACADS-GB Crystalization	9	27	96	Letter
1421	12	Other State Docs	JACADS-GB Crystalization	9	9	96	Letter
1420	12	Other State Docs	JACADS-GB Crystalization	9	6	96	Letter
1803	12	Other State Docs	EPA HQ Rev.of Armys proposal of HCl acute Tox.	9	4	96	Letter
1852	12	Other State Docs	JACADS Class 2 Permit Mod Approval	5	28	96	Letter
1534	12	Other State Docs	JACADS HVC Filter Change-Out Tests	5	23	96	Letter
1535	12	Other State Docs	Waste Analysis Plan/Notice of Deficiency	5	15	96	Letter
1475	12	Other State Docs	MPF Surrogate Trial Burn	4	18	96	Memo
1533	12	Other State Docs	Notice of Violation - TOCDF	4	15	96	Letter
1942	12	Other State Docs	JACADS request for additional information	9	6	95	Letter
1802	12	Other State Docs	Pollution Abatement Filter System (PFS) Mod Re	7	20	95	Letter
1383	12	Other State Docs	JACADS - Determination of Violation	3	13	95	Report
1941	12	Other State Docs	JACADS GB ReleaseNotification to EPA R7	4	4	94	Letter
1981	15	CTUIR	Responses to CTUIR comments on Final EIS	11	8	96	Report
1977	15	CTUIR	AQ dispersion and deposition review and eval	11	5	96	Report
1978	15	CTUIR	Eval of combustion by-products Task 6	11	5	96	Report
1979	15	CTUIR	Eval of Monitoring Locations Task 8.2 & 9	11	5	96	Report
1980	15	CTUIR	Interim final eval of chem fate to transport	11	5	96	Report
1229	15	CTUIR	MOA between Army and CTUIR	10	17	96	MOA
1804	15	CTUIR	CTUIR's EIS Comments	7	24	96	Letter
1594	15	CTUIR	Response to 6/7/96 letter to LMarsh	6	24	96	Letter
1593	15	CTUIR	Support for Sen. Ford Amendment to Defense	6	18	96	Letter
1592	15	CTUIR	Extension of public comment period...	6	7	96	Letter
1629	15	CTUIR	Response to 4/26/96 letter	5	26	96	Letter
1536	15	CTUIR	EPA/Tribes Scope of work	4	26	96	Outline
1567	15	CTUIR	CTUIR/SSRP Follow-up on DEQ Briefing to EQC	4	26	96	Letter
1853	15	CTUIR	Transmittal of draft permit diskettes	4	16	96	Memo
1854	15	CTUIR	Unable to attend EQC Briefing on 4/12/96	4	12	96	Letter
1478	15	CTUIR	Response to moratorium request	4	1	96	Letter
1388	15	CTUIR	Response to Feb 15,1996 letter from DSampson	3	19	96	Letter
1387	15	CTUIR	CTUIR/SSRP Rev. Draft EIS Comments	3	14	96	Letter
1236	15	CTUIR	Comment on CTUIR Feb 15,96 Letter	2	23	96	Letter
1237	15	CTUIR	Objection to Umatilla Indians' Petition	2	23	96	Letter
1235	15	CTUIR	Comments by the Tribes - Incinerator	2	21	96	Letter

1234	15	CTUIR	Mayors Response to Moratorium Request	2	16	96	Letter
1161	15	CTUIR	Request for Assistance in Estab. Moratorium	2	15	96	Letter
1162	15	CTUIR	Proposal for Coord effort to rectify Defic.	2	15	96	Letter
1163	15	CTUIR	Statement of Armand Minthorn	2	15	96	Statement
1164	15	CTUIR	News Release	2	15	96	NewsRelease
1165	15	CTUIR	Statement of Donald Sampson	2	15	96	Statement
1386	15	CTUIR	News Release Material From CTUIR	2	15	96	NewsRls
1066	15	CTUIR	Response to 1-19-96 letter	2	6	96	Letter
1477	15	CTUIR	Quarterly Leaker Reports For UAD	1	23	96	Letter
1054	15	CTUIR	Follow up to 1-11-96 EQC re Issues	1	19	96	Letter
1476	15	CTUIR	CTUIR/SSRP Comments on EPA Military Munitions	1	8	96	Letter
1055	15	CTUIR	Invitation to meet	1	3	96	Letter
1056	15	CTUIR	Corrective action authorization	12	8	95	Letter
490	15	CTUIR	Final Rule HW Prog. Revision	11	28	95	FederlReg
491	15	CTUIR	Working Relationship w/ CTUIR	11	14	95	Letter
1037	15	CTUIR	Columbia Basin Salmon Policy	11	9	95	Policy
492	15	CTUIR	HW Management Program Revisions	11	8	95	Letter
1385	15	CTUIR	Minutes from meeting with CTUIR	11	1	95	Letter
493	15	CTUIR	Explain Chem Weapons Incin.	10	26	95	Article
494	15	CTUIR	Nerve & Blister Agents	10	17	95	Memo
1384	15	CTUIR	Triabal Advisory Committee Outreach	9	29	95	Letter
1205	15	CTUIR	Comments on Draft Pre-trial Burn Work Plan	8	22	95	Letter
495	15	CTUIR	Demil Risk Assessment	8	21	95	Letter
496	15	CTUIR	Info. Request at 5/30/95 Meeting;Followup	8	14	95	Memo
497	15	CTUIR	Rsk Asses. Prpsd Incnrtn Cmplx	5	12	95	Letter
1160	15	CTUIR	Proposed Agenda Items for May 30, 1995 Mtg	5	12	95	Letter
1159	15	CTUIR	Response to Draft Risk Assessment Work Plan	4	24	95	Letter
498	15	CTUIR	CTUIR Paper on Risk Asses.	3	30	95	Report
1158	15	CTUIR	Colubia Basin Salmon Policy	3	8	95	Report
1233	15	CTUIR	Umatilla Tribes contact	12	28	92	Email
1232	15	CTUIR	Comments on CRCS and DEIS	11	9	92	Letter
499	15	CTUIR	Prmnnt Rules to Spill Rules	4	0	87	Memo
1231	15	CTUIR	Treaty w/Walla Walla,Cayuse,and Umatilla Tribe	0	0	0	Report
1479	20	State Permits	ANCDF Draft Permits	11	3	95	Letter
500	20	State Permits	CSDP	7	18	95	Air Prmt
1672	20	State Permits	Major Issues for review of ANAD Subpart B	3	20	95	Report
501	20	State Permits	ANCDF RCRA Application Sec D-9	6	1	94	ApplSec
502	20	State Permits	Tooele Depot S. Final Permit	7	18	89	Memo
508	20	State Permits	Tooele Permit/final 7/89	7	1	89	Permit
509	20	State Permits	Tooele Permit/draft 4/89	4	7	89	Permit
503	20	State Permits	Demil Interim Draft Permit	3	2	89	Memo
511	20	State Permits	Tooele Permit/attachments 1-3	2	17	89	Attach
512	20	State Permits	Tooele Permit/attachments 4-8	2	17	89	Attach
513	20	State Permits	Tooele Permit/attachment 9	2	17	89	Attach
514	20	State Permits	Tooele Permit/attachments 9-10	2	17	89	Attach
515	20	State Permits	Tooele Permit/attachments11-13	2	17	89	Attach

504	20	State Permits	Tooele Army Depot/draft	2	14	89	Permit
510	20	State Permits	Tooele Permit 8/89	2	0	89	Permit
	20	State Permits	RCRA & HW Permit Application	9	1	88	Applictn
505	20	State Permits	JACADS Permit Modification	5	27	88	Permit
506	20	State Permits	Major Operating Conditns Deactvtn Furnance	0	0	0	Table
507	20	State Permits	JACADS Permit	0	0	0	Permit
516	20	State Permits	Tooele Permit/attachments14-21	0	0	0	Attach
1987	21	Other State NODs	Pine Bluff Arsenal response to NODs	8	12	96	NODs
1855	21	Other State NODs	PBCDF NOD for Part B Application	6	7	96	Letter
1480	21	Other State NODs	Fourth NOD Comments ANCDF RCRA/Air App.	3	7	96	Letter
1505	21	Other State NODs	ANCDF Draft RCRA Change Pages	6	19	95	Report
517	21	Other State NODs	Attached FYI, Fnl Sub X Comments, Notes, etc	10	12	94	Rvw Cmmnts
518	21	Other State NODs	Preliminary Design Review	11	18	88	Report
519	21	Other State NODs	Documents w/second NODs	11	18	87	Memo w/L
520	21	Other State NODs	Anniston Army Depot	11	3	87	Letter
2329	21	Other State NODs	NOD for Tooele CSDP, Summary of Responses	10	15	87	Report
521	21	Other State NODs	CSDS Onsite Alternative	10	15	87	Letter
522	21	Other State NODs	Tooele NOD Summary of Response	8	27	87	Report
523	21	Other State NODs	Matrix of NODs Lxngtn,Nwprt,Tle	3	18	87	Memo
524	21	Other State NODs	DOD Chem. Agent Munitions Prmt	1	21	87	Letter
525	21	Other State NODs	Utah NOD Comments for Dept Army	11	15	86	Report
1829	30	Army Reports	Exec.Summary-Alternative Technology Eval. Rpt	9	9	96	Report
1830	30	Army Reports	UMCDF Phase 1 Quantitative Risk Assess.	9	0	96	Report
1983	30	Army Reports	Probablistic seismic hazard assessment UMCDF	9	0	96	Report
1828	30	Army Reports	Tooele HVAC Agent Leak Report	8	28	96	Report
1982	30	Army Reports	Seismic Fragilities of Structures & Equip.	8	0	96	Report
1856	30	Army Reports	Interim Status Assessment for Chem Demil	4	15	96	Report
1827	30	Army Reports	Draft-UMCDF Phase 1 Quantitative Risk Assess.	4	0	96	Report
1510	30	Army Reports	JACADS RCRA Wkly Feed/Incident Rpt 1/21-27/96	2	14	96	Report
1833	30	Army Reports	Surrogate Trial Burn Report for LIC1	11	29	95	Report
1834	30	Army Reports	Surrogate Trial Burn Report for LIC1-Appndx A-	11	27	95	Report
1835	30	Army Reports	Surrogate Trial Burn Report for LIC1-Appndx I-	11	27	95	Report
1390	30	Army Reports	Ton Container Survey Analysis of HD @ APG	10	0	95	Report
528	30	Army Reports	Off-Site Meterolgcl Data Set	4	3	95	Report
1409	30	Army Reports	RCRA trial burn reports-JACADS-Agent GB	3	0	95	Report
726	30	Army Reports	M55 Rocket Storage Life Eval	1	23	95	Report
530	30	Army Reports	M55 Rocket Storage Life Eval	12	0	94	Report
1268	30	Army Reports	Rpt of 11-19-94 ECR "B" Incident	12	0	94	Report
1166	30	Army Reports	Estimated Control Limits... - Final Draft	11	0	94	Report
1167	30	Army Reports	Appendix H: UAD Activity Site Report	11	0	94	Report
727	30	Army Reports	Health Risk Assessment	9	12	94	Report
531	30	Army Reports	60% Cntmnted Soil Ammntn Dmltn	9	0	94	Report
532	30	Army Reports	60% Cntmntd Soil Ammntn Demltn	9	0	94	Report
533	30	Army Reports	Meteorological Monitoring Plan	7	15	94	Report
534	30	Army Reports	Summary Cryofracture Process	5	1	94	Report
1428	30	Army Reports	Alternative Demil Tech Report	4	11	94	Report

1427	30	Army Reports	Alternative Demil Tech Report - Executive Summ	4	11	94	Report
529	30	Army Reports	1993 Annual Report of RCRA NON	3	5	94	Report
1267	30	Army Reports	Liquid Incinerator Slag Mngmnt System Report	1	21	94	Report
535	30	Army Reports	Future Uses of the CAMDS:	12	1	93	Report
1265	30	Army Reports	Site Monitoring Concept Study	9	15	93	Report
536	30	Army Reports	Ass of Carbon Fltr System Perf	9	1	93	Report
1266	30	Army Reports	Assessment of Carbon Filter System Performance	9	0	93	Report
537	30	Army Reports	Data Ass Carbon Fltr Sys Perf	8	1	93	Report
1263	30	Army Reports	Health Risk Assessment No. 42-21-M1X6-93	7	8	93	Report
538	30	Army Reports	Physical & Chemical Integrity	7	1	93	Report
539	30	Army Reports	Eval HD Projectile:JACADS OVT	5	1	93	Report
1826	30	Army Reports	Summary Evaluation-JACADS Ops Verification Tes	5	0	93	Report
541	30	Army Reports	Brn w/ HD Feed Liqd Incin	4	6	93	Report
542	30	Army Reports	Brn w/ HD Feed Liqd Incin	4	6	93	Report
543	30	Army Reports	Brn w/ HD Feed Liqd Incin	4	6	93	Report
544	30	Army Reports	Brn w/ HD Feed Liqd Incin	4	6	93	Report
545	30	Army Reports	Brn w/ HD Feed Liqd Incin	4	6	93	Report
546	30	Army Reports	Brn w/ HD Feed Liqd Incin	4	6	93	Report
547	30	Army Reports	Brn W/ HD Feed Liqd Incin	4	6	93	Report
548	30	Army Reports	Brn w/ HD Feed Liqd Incin	4	6	93	Report
549	30	Army Reports	Brn W/ HD Feed Liqd Incin	4	6	93	Report
1262	30	Army Reports	Health Risk Assessment No. 42-21-M1BE-93	4	6	93	Report
540	30	Army Reports	Eval HD Ton Cntnr:JACADS OVT	4	0	93	Report
	30	Army Reports	Health Risk Assess. Inhalation, Combustion	4	0	93	
550	30	Army Reports	Demo Burn Metal Parts Furnance W/ HD	3	1	93	Report
551	30	Army Reports	Demo Burn Metal Parts Furnance W/ HD	3	1	93	Report
552	30	Army Reports	Demo Burn Metal Parts Furnance w/ HD	3	1	93	Report
553	30	Army Reports	Demo Burn Metal Parts Furnance w/ HD	3	1	93	Report
554	30	Army Reports	Demo Burn Metal Parts Furnance w/ HD	3	1	93	Report
555	30	Army Reports	Demo Burn Metal Parts Furnance w/ HD	3	1	93	Report
556	30	Army Reports	Demo Burn Metal Parts Furnance w/ HD	3	1	93	Report
557	30	Army Reports	Demo Burn Metal Parts Furnance w/ HD	3	1	93	Report
558	30	Army Reports	Demo Burn Metal Parts Furnance w/ HD	3	1	93	Report
559	30	Army Reports	Demo Burn Metal Parts Furnance w/ HD	3	1	93	Report
560	30	Army Reports	Results Trl Brn Metal Parts Furnance W/ HD	3	1	93	Report
561	30	Army Reports	Extrtaction Labs Ntbk/Bench Nt	3	1	93	Report
562	30	Army Reports	Trl Burn Rprt HD-MPF JACADS	3	1	93	Report
563	30	Army Reports	Dmstratn Tst Brn Thrml Dstrctn	2	0	93	Report
1389	30	Army Reports	RCRA Trial Burn Report for JACADS - HD	12	16	92	Report
564	30	Army Reports	Evaluation of VX Rocket Test:	11	0	92	Report
565	30	Army Reports	Trl Brn w/ VX Feed Liqd Incin JACADS	10	6	92	Report
566	30	Army Reports	Trl Brn w/ VX Feed Liqd Incin JACADS	10	6	92	Report
567	30	Army Reports	Trl Brn w/ VX Feed Liqd Incin JACADS	10	6	92	Report
568	30	Army Reports	Trl Brn w/ VX Feed Liqd Incin JACADS	10	6	92	Report
569	30	Army Reports	Trl Brn w/ VX Feed Liqd Incin JACADS	10	6	92	Report
570	30	Army Reports	Trl Brn w/ VX Feed Liqd Incin JACADS	10	6	92	Report

571	30	Army Reports	Trl Brn w/ VX Feed Liqd Incin JACADS	10	6	92	Report
572	30	Army Reports	Trl Brn w/ VX Feed Liqd Incin JACADS	10	6	92	Report
573	30	Army Reports	Trl Brn w/ VX Feed Liqd Incin JACADS	10	6	92	Report
574	30	Army Reports	Trl Brn w/ VX Feed Liqd Incin JACADS	10	6	92	Report
575	30	Army Reports	Trl Brn w/ VX Feed Liqd Incin JACADS	10	6	92	Report
576	30	Army Reports	Trl Brn & TSCA Demo DFS w/ M55 VX Rckts	10	6	92	Report
577	30	Army Reports	Trl Brn & TSCA Demo DFS w/ M55 VX Rckts	10	6	92	Report
578	30	Army Reports	Trl Brn & TSCA Demo DFS w/ M55 VX Rckts	10	6	92	Report
579	30	Army Reports	Trl Brn & TSCA Demo DFS w/ M55 VX Rckts	10	6	92	Report
580	30	Army Reports	Trl Brn & TSCA Demo DFS w/ M55 VX Rckts	10	6	92	Report
581	30	Army Reports	Trl Brn & TSCA Demo DFS w/ M55 VX Rckts	10	6	92	Report
582	30	Army Reports	Trl Brn & TSCA Demo DFS w/ M55 VX Rckts	10	6	92	Report
583	30	Army Reports	Trl Brn & TSCA Demo DFS w/ M55 VX Rckts	10	6	92	Report
584	30	Army Reports	Trl Brn & TSCA Demo DFS w/ M55 VX Rckts	10	6	92	Report
585	30	Army Reports	Trl Brn & TSCA Demo DFS w/ M55 VX Rckts	10	6	92	Report
586	30	Army Reports	Trl Brn & TSCA Demo DFS w/ M55 VX Rckts	10	6	92	Report
1261	30	Army Reports	Disposal of Chemical Agents & Munitions	10	0	91	Report
587	30	Army Reports	Draft DOD on Env Response Closing Miltry Bse	9	23	91	Rpt/Memo
	30	Army Reports	Health Risk Asses. Inhalation Risk, Incin.	9	0	91	
588	30	Army Reports	Evaluation /GB Rocket Campaign	7	25	91	Rpt/Memo
589	30	Army Reports	Trial Burn Rslt-JACADS-LIC,GB	6	17	91	Report
590	30	Army Reports	Eval GB Rckt Cmpn:JACADS OVT	6	1	91	Report
591	30	Army Reports	Monitoring Concept Plan	4	5	91	Report
593	30	Army Reports	Rslt Trl Brn Liquid Incin	12	10	90	Report
592	30	Army Reports	Rslt Trl Brn Liquid Incin	12	5	90	Report
1260	30	Army Reports	Chemical Stockpile Disposal Program	10	0	90	Report
594	30	Army Reports	OVT Plan for the JACADS Vol.1	2	9	90	Report
595	30	Army Reports	OVT Plan for the JACADS Vol.2	2	9	90	Report
1259	30	Army Reports	Disposal of Chemical Agents & Munitions	2	0	90	Report
526	30	Army Reports	Requirement of Report of HW Managemnt Actvts	1	4	90	Letter
527	30	Army Reports	ST Demil During 1st Quarter FY90	1	2	90	Memo
596	30	Army Reports	OVT Directive for the JACADS	3	1	89	Report
597	30	Army Reports	CAMDS Filter Design Panel	4	0	88	Report
598	30	Army Reports	CSDP/Implementaion Plan	3	15	88	Report
599	30	Army Reports	Elmts Prcss Dsgn Criteria CSDP	11	13	87	Report
600	30	Army Reports	Eval CAMDS DFS M55 Rckt Incin	10	1	87	Report
601	30	Army Reports	Eval CAMDS DFS M55 Rckt Incin	10	1	87	Report
602	30	Army Reports	Eval CAMDS DFS M55 Rckt Incin	10	1	87	Report
603	30	Army Reports	Poll. Abtmnt Sys Ass CAMDS LIC	8	1	87	Report
604	30	Army Reports	Rsk Analysis Contnued Strge of Chem Muntns	8	0	87	Report
605	30	Army Reports	Rsk Analysis Onsite Dspsl of Chem Muntns	8	0	87	Report
606	30	Army Reports	Rsk Anlysis Chem Mntns Regnl or Natl Sites	8	0	87	Report
607	30	Army Reports	CAMDS Follow-up Ass. Panel	7	24	87	Report
608	30	Army Reports	Air Pollution Control Syst Ass	6	1	87	Report
609	30	Army Reports	Technical Investigation Board	3	30	87	Report
610	30	Army Reports	CSDP Supplement	3	1	87	Report

611	30	Army Reports	Tech. Ass. Determination Chem	1	1	87	Report
612	30	Army Reports	Nerve Agent Demil Project	10	28	86	Report
613	30	Army Reports	5X Thermal Task Report	9	3	86	Report
614	30	Army Reports	Chem Stockpile Displ Cncpt Pln	3	15	86	Report
615	30	Army Reports	Chem Stockpile Displ Cncpt Pln	3	15	86	Report
616	30	Army Reports	M55 Rocket Disposal Program Srudy	11	22	85	Report
617	30	Army Reports	Independent Evalua/Assessment	10	0	85	Report
618	30	Army Reports	Disposal of Chemical Munitions	12	0	84	Report
619	30	Army Reports	Thermal Decomp. of GB, VX & HD	9	28	84	Report
620	30	Army Reports	Military Explosives	9	20	84	Report
621	30	Army Reports	Effects of Subacute Exposures	6	0	83	Report
622	30	Army Reports	Air Monitoring System Tech Ass	4	1	83	Report
627	30	Army Reports	Final Demilitarization Plan	0	0	83	Report
623	30	Army Reports	Ana Decontaminated Packing -	12	7	81	Report
624	30	Army Reports	Revision of Lmts Human Expos.	12	0	79	Report
625	30	Army Reports	Prfrmnce Evaluation Gas Filtrs	10	0	78	Report
626	30	Army Reports	Report for GB Challange Testng	2	28	77	Report
628	30	Army Reports	Executive Summary	0	0	0	Summary
2321	31	EIS Reports	Revised Final EIS	11	0	96	Report
1668	31	EIS Reports	Disposal of Chem Agents & Munitions-Final EIS	5	0	96	Report
1673	31	EIS Reports	Comments on Draft EIS	1	10	96	Letter
629	31	EIS Reports	Disposal of Chem. Agents & Munitions Stored	12	0	95	Report
637	31	EIS Reports	Review of Monitoring Activities	6	13	94	Report
638	31	EIS Reports	Evltn JACADS Operational Verification Tsting	6	13	94	Report
1269	31	EIS Reports	Eval of the JACADS Operational Verification	0	0	94	Report
1270	31	EIS Reports	Review of Monitoring Activities	0	0	94	Report
1271	31	EIS Reports	Convention-Prohibition of Dev,Production etc	0	0	93	Report
1666	31	EIS Reports	Disposal of Chem Agents & Munitions-Prelim EIS	5	0	92	Report
630	31	EIS Reports	Proposed Burn of Chem Weapons	1	17	92	Letter
640	31	EIS Reports	Disposal Chemical Agents/draft	10	0	91	Report
	31	EIS Reports	Final EIS	8	1	91	Report
641	31	EIS Reports	Final/Base Realignment&Closure	8	0	91	Report
642	31	EIS Reports	JACADS/final 2nd Supplemental-	6	0	90	Report
643	31	EIS Reports	JACADS/final 2nd Supplemental-	6	0	90	Report
631	31	EIS Reports	EIS CSDP	1	11	89	Letter
644	31	EIS Reports	JACADS/final	12	0	88	Report
645	31	EIS Reports	Chemical Stockpile Dspsl/final	1	0	88	Report
646	31	EIS Reports	Chemical Stockpile Dspsl/final	1	0	88	Report
1168	31	EIS Reports	Chemical Stockpile Disposal/Final	1	0	88	Report
647	31	EIS Reports	Evaluation of Draft Programatic EIS	9	30	87	Report
648	31	EIS Reports	JACADS/draft Supplemental EIS	8	17	87	Report
633	31	EIS Reports	CSDP Drft Prgrammtc Env. Impct	9	19	86	Letter
634	31	EIS Reports	CSDP-DPEIS	8	27	86	Letter
635	31	EIS Reports	Disposal of Nerve Agents	8	12	86	Letter
650	31	EIS Reports	Notice for Public Hearing	7	30	86	Letter
649	31	EIS Reports	Chemical Stockpile Dspsl/draft	7	1	86	Report

636	31	EIS Reports	Draft EIS for UAD	0	0	0	SpdLttr
1986	32	Other Reports	Dioxin Report	10	29	96	Report
1984	32	Other Reports	Remarks from Dr.RMcGee before the CDCAC	10	7	96	Report
1985	32	Other Reports	Public Involvement and the ChemDisposal Prog	10	0	96	Report
1943	32	Other Reports	Notes from 8/22/96 EQC Meeting	8	27	96*	Notes
1859	32	Other Reports	Tech.wrkshp of WTI Incinerator R.A. issues	5	0	96	Report
1570	32	Other Reports	The Incineration of HD Agenct at JACADS	3	17	96	Report
1391	32	Other Reports	Revised Draft EIS Comments	3	14	96	Letter
1057	32	Other Reports	Chemical Weapons Stockpile Info Declassified	1	22	96	Report
1537	32	Other Reports	The Oregon Experiment:A Grassroots Approach	1	0	96	Report
1538	32	Other Reports	Evaluation of Army's Draft Assess Criteria...	1	0	96	Report
651	32	Other Reports	HW Incineration Study	5	12	95	Memo
1058	32	Other Reports	List of GAO Reports	5	5	95	Report
652	32	Other Reports	Trial Burn Plan 4 LIC1	4	24	95	Report
653	32	Other Reports	Test Results & Operations	1	12	95	Lttr/Memo
1858	32	Other Reports	Stability of the US Stockpile	12	0	94	Report
	32	Other Reports	Analytical Methods for Env Sampling	9	20	94	Book
1548	32	Other Reports	US Chem Weapons Destruction Program	9	0	94	Report
654	32	Other Reports	Community Assessment Survey	8	0	94	Report
	32	Other Reports	Review of Monitoring Activities -	6	13	94	Report
	32	Other Reports	Evaluation of JACADS OVT Part2	6	13	94	Report
	32	Other Reports	Review of Monitoring Activities	6	13	94	Report
	32	Other Reports	Evaluation of JACADS OVT Part2	6	13	94	Report
655	32	Other Reports	Installation Restoration Prgm	4	12	94	Report
656	32	Other Reports	Columbia Rvr Pathway Dosimtry	4	0	94	Report
657	32	Other Reports	Atmosphrc Pathwy Dosimtry	4	0	94	Report
2330	32	Other Reports	Recommendations for Disposal	3	17	94	Report
658	32	Other Reports	Validation of HEDR Models	1	0	94	Report
659	32	Other Reports	Radionclde Relse To Atmosph.	1	0	94	Report
660	32	Other Reports	Radionclde Concntratns Columbia R. Frm Hanfrd	1	0	94	Report
661	32	Other Reports	Commercl Milk Distrbtn	12	0	93	Report
662	32	Other Reports	Comprehnsve Pln Exctve Summry	10	0	93	Report
663	32	Other Reports	Comprehensive Plan Summary	10	0	93	Report
664	32	Other Reports	Technical Report	10	0	93	Report
665	32	Other Reports	Alternative Technologies	8	2	93	Report
1569	32	Other Reports	Chemical Weapons Demil.and Disposal	5	12	93	Report
666	32	Other Reports	List of Hazardous Substances	1	13	93	Report
667	32	Other Reports	1990 Fee Adjustment	8	25	92	Letter
1206	32	Other Reports	Citizens' Environmental Protection Committee	7	0	92	Report
1857	32	Other Reports	Disposal of Chemical Weapons-Alt.Tech.	6	0	92	Paper
668	32	Other Reports	Chemical Demil POHC Evaluation	2	10	92	Letter
1568	32	Other Reports	All Fired Up	1	1	92	Report
669	32	Other Reports	Final Report- POHC Evaluation	11	12	91	Report
670	32	Other Reports	"Playing With Fire HW Incin"	10	5	91	Report
671	32	Other Reports	Engr Anlsis Chem Agnt Demil Plnt	1	0	91	Report
673	32	Other Reports	Cryofracture/Tech. Assessment	0	0	91	Manual

672	32	Other Reports	Stckple Dstrctn Delay Army Prototype Dspsl	7	0	90	Report
674	32	Other Reports	Nevada Draft DOD/IRP Agreement	5	17	90	Memo
675	32	Other Reports	Obstacles to Pln 2 Destry Stck	5	0	90	Report
676	32	Other Reports	Comments Draft Plan Test	12	22	89	Letter
677	32	Other Reports	Commnts on Report by RWeston	6	21	89	Letter
678	32	Other Reports	Proposal for EPP & Systm for Chem Demil	3	1	89	Report
679	32	Other Reports	EPA Contract; Army CADF	12	22	88	Letter
680	32	Other Reports	Primary Combstn Chmbr	11	14	88	Report
681	32	Other Reports	Briefing EPA & State of Utah	4	28	88	Report
682	32	Other Reports	UMDA CAIRA Plan, Rvsns Rcmnded	4	21	88	Letter
683	32	Other Reports	GAO Report, Contrctr Indemnfctn	3	28	88	Rules
684	32	Other Reports	Proposed Revisions to Annex C	2	26	88	Rvsns
685	32	Other Reports	2nd HW Inventory	2	10	88	Letter
686	32	Other Reports	Installatn Restrtn Prog Plan	2	0	88	Report
687	32	Other Reports	Request Doc Oprtn of DATs	10	27	87	Letter
688	32	Other Reports	Army Reports on Nerve Agent Incid. Tooele	9	22	87	Memo
689	32	Other Reports	Army Rprt Toole JACADs Nrve Agt	9	22	87	Memo
690	32	Other Reports	App for ACDP Reviewed By AQ Div	9	8	87	Letter
1410	32	Other Reports	Archeological Overview for UAD	9	0	87	Report
691	32	Other Reports	Sets of Text for RCRA HW Prmt	8	12	87	Letter
692	32	Other Reports	Data Bases for Chem Agents to be Destroyed	6	26	87	Letter
693	32	Other Reports	Downwind Hazard Plts Enclosed	6	11	87	Letter
694	32	Other Reports	Final Interim RCRA Facility Assessment	6	0	87	Report
695	32	Other Reports	Document and Needed Information	4	29	87	Memo
696	32	Other Reports	Houk's Statement of 3/26/87	3	26	87	Sttment
697	32	Other Reports	Liquid Incinerator Facility	3	20	87	Report
698	32	Other Reports	Health Aspects Emergncy Respns	3	10	87	Report
699	32	Other Reports	PCB Update	3	3	87	Report
700	32	Other Reports	Army Doc Nerve Agent Exposure	12	22	86	Memo
701	32	Other Reports	Request of Technical Reports	11	12	86	Letter
702	32	Other Reports	Submittal of Additional Comments	10	21	86	Letter
703	32	Other Reports	When does a Waste Become a Waste?	10	20	86	Memo
1611	32	Other Reports	M55 Rocket Separation Study	11	22	85	Report
704	32	Other Reports	Rsk Asses. Rsk Mngmnt Toxic Sub	4	0	85	Report
705	32	Other Reports	Report of Chem Compositions	10	20	83	Report
706	32	Other Reports	Annex M OR State Emerg Oprtns Plan UCERP	1	0	80	Report
707	32	Other Reports	Phase I Lessons Learned	0	0	0	Report
708	40	Army Manuals	Contract TOCDF	7	20	93	Letter
711	40	Army Manuals	P-MOP Operator Certification Concurrence Sht	7	17	93	Report
709	40	Army Manuals	P-MOP Operator Certification Concurrence Sht	6	23	93	Report
710	40	Army Manuals	P-MOP Operator Certification Concurrence Sht	6	22	93	Report
712	40	Army Manuals	Reentry Planning	4	1	90	Report
713	40	Army Manuals	Evaluating Protctve Actns Chem Agent Emerg.	4	1	90	Report
714	40	Army Manuals	Oil & Hzrdous Substbce ISCP	4	0	85	Report
715	40	Army Manuals	Oprtn DATs at Designated Military Installtns	6	0	83	Report
716	40	Army Manuals	Oprtn DATs at Designated Military Installtns	6	0	83	Report

717	40	Army Manuals	Engineering Design Handbook	12	15	78	Report
1418	50	Plans & Maps	On-site container O&M mannual	11	30	95	Mannual
718	50	Plans & Maps	Tooele RCRA Permit Drawings	2	24	89	Plans
2273	50	Plans & Maps	Figure 3-13, Unitized Total Deposition Rates	0	0	0	Map
2274	50	Plans & Maps	Figure 3-12, Unitized Air Prtclte Concentratio	0	0	0	Map
2275	50	Plans & Maps	Figure 3-11, Unitized Air Prtclte Cncntrtn	0	0	0	Map
2276	50	Plans & Maps	Figure 5-3, Wildlife Areas of Interest	0	0	0	Map
2277	50	Plans & Maps	Figure 3-10, Umatilla Watershed	0	0	0	Map
2278	50	Plans & Maps	Figure 3-9, Study Area Watershed	0	0	0	Map
2279	50	Plans & Maps	Figure 3-8, Selected Receptors	0	0	0	Map
2280	50	Plans & Maps	FIgure 3-7, Polar, Boundary, & Discrete Recptr	0	0	0	Map
719	50	Plans & Maps	Sheet 1 of 3	0	0	0	Plans
720	50	Plans & Maps	Sheet 2 of 3	0	0	0	Plans
721	50	Plans & Maps	Sheet 3 of 3	0	0	0	Plans
722	50	Plans & Maps	Projectile/Mortar Processing	0	0	0	Plans
723	50	Plans & Maps	Provost Marshal - Regional Map	0	0	0	Map
724	50	Plans & Maps	Fig B-2-1 Topographic Map	0	0	0	Map
1033	50	Plans & Maps	Rmdl Actn Wrkpln	0	0	0	Map
1674	50	Plans & Maps	Munitions Processing Schematics	0	0	0	Plans
2320	55	Alt. Technologies	Explore M4, Chem Demil News	11	0	96	News
1988	55	Alternative Tech	Promise of Alternative Technologies	10	30	96	Report
1945	55	Alternative Tech	Thank you letter to Wendell Ford	9	14	96	Letter
1863	55	Alternative Tech	Alt Tech Program Evaluation report - DRAFT	9	9	96	Report
2270	55	Alternative Tech	Review & Evaluation of Alt Chem Dspsl Tech	9	0	96	Report
1862	55	Alternative Tech	Tech & Econ Analysis Comp Alt.Tech.to Baseline	7	0	96	Report
1634	55	Alternative Tech	ECO Logic Press Release	6	10	96	PressRls
1571	55	Alternative Tech	Plasma ARC & Quantum Tech, Houston	5	1	96	Report
1633	55	Alternative Tech	Exec.Summary Prelim RA of Alt Tech for Chem...	5	0	96	Report
1667	55	Alternative Tech	Prelim. R.A. of Alt Tech for Chem Demil	5	0	96	Report
1861	55	Alternative Tech	Pyro-Plasma Alternative Tech. requesting info	4	29	96	Letter
1860	55	Alternative Tech	Molten Metal Federal Register Information	4	8	96	FedReg
1595	55	Alternative Tech	Pyro-Plasma Process	3	21	96	Report
1596	55	Alternative Tech	Moletn Metal Documents	2	27	96	Reports
1458	55	Alternative Tech	Supercritical H2O Oxidation information	2	26	96	Report
1457	55	Alternative Tech	Molten Metal News Release	1	17	96	NewsRls
1456	55	Alternative Tech	Various Army Alt Tech. Outreach Material	12	0	95	Articles
1454	55	Alternative Tech	CDC Brochure Demil of Chemical Weapons	10	0	95	Brochure
1455	55	Alternative Tech	Ecologic Steam Processing	10	0	95	Report
1228	55	Alternative Tech	Advances in Altern Demil Tech - Wkshp	9	25	95	Report
1453	55	Alternative Tech	Application of the Silver(II) Process	9	25	95	Report
1059	55	Alternative Tech	Supercritical Water Oxidation Lit.	5	19	95	Brochure
1452	55	Alternative Tech	Chemical Reactions for Neutralising Chem...	5	1	95	MagArt
728	55	Alternative Tech	Supercritical Water Oxidation	6	29	94	Article
729	55	Alternative Tech	Destrctve Desrptn Adsrptn Tech	6	13	94	FactSht
730	55	Alternative Tech	Chem Weap WorkGroup Conference	3	17	94	Memo
1426	55	Alternative Tech	Recommendations for Disposal	3	7	94	Report

731	55	Alternative Tech	HyMelt Demonstration Project	2	18	94	Hndout
639	55	Alternative Tech	Alt Tech Destruction of Chem Agents & Munition	8	2	93	Report
732	55	Alternative Tech	Mult. Alter. Studied Disposal	6	10	93	Release
733	55	Alternative Tech	Resource Recovery & Poll Prev	6	4	92	Hndout
734	55	Alternative Tech	Destruction of Chemical Warfare Agents	6	4	92	Present
735	55	Alternative Tech	Chem Neutralization/Hydrolysis	0	0	0	Article
736	55	Alternative Tech	Prac Advantages Biodegradation	0	0	0	Hndout
1948	60	Coop Agreement	Typo changes in FY97 Coop Agreement letter	10	16	96	Letter
1946	60	Coop Agreement	Funding Request FFY97	10	11	96	Letter
1947	60	Coop Agreement	Fax cover sheet for FY97 request	10	11	96	FaxCover
1711	60	Coop Agreement	Comments for 2nd and 3rd FFY Quarters	8	30	96	Figures
1865	60	Coop Agreement	Additional Funding Request-FY96	5	15	96	Letter
1864	60	Coop Agreement	Funding Info Req-FY95,Prelim Funding Req-FY96	5	5	96	Letter
1392	60	Coop Agreement	UAD FY96 Reports	3	19	96	Fax
737	60	Coop Agreement	Agreement Funding Request	9	8	95	Letter
738	60	Coop Agreement	Agreement Funding Request - FY95	3	30	95	Letter
739	60	Coop Agreement	Agreement Funding Request - FY95	2	28	95	Letter
740	60	Coop Agreement	Federal Fiscal Year 1995	0	0	95	Agreemnt
1169	60	Coop Agreement	FY95 Projected Expenditures Report	10	21	94	Report
741	60	Coop Agreement	Federal Fiscal Year 1994-3rd Q	7	20	94	Agreemnt
742	60	Coop Agreement	CDCAC Members Names & Addresses	12	16	93	List
743	60	Coop Agreement	Environmental Permitting Act.	6	23	93	Letter
744	60	Coop Agreement	HW Permtting Chem. Demil Facil.	10	9	92	Agreemnt
745	60	Coop Agreement	Construction Permit & Licenses	6	1	92	Letter
1540	61	Quarterly Reports	Activity Summary 1st Quarter FFY96	4	25	96	Report
1207	61	Quarterly Reports	Activity Rpt, 4th Quarter FFY 1995	11	7	95	Report
746	61	Quarterly Reports	4th Qrter 1994, Actvty Rprt	2	28	95	Letter
1713	65	Facts & Studies	Chart of number of leakers at various ChemStoc	9	11	96	Memo
1868	65	Facts & Studies	Leaker Figures - All Sites	8	22	96	Memo
1949	65	Facts & Studies	Review of waste incineration research program	8	15	96	Letter
1869	65	Facts & Studies	Overheads of Quantitative Risk Assessment	8	6	96	Overheads
1712	65	Facts & Studies	Lower Columbia River Bi-State WQ Program	6	0	96	Report
1636	65	Facts & Studies	Chem Reactions for Neutralising Chemical...	5	1	96	Report
1574	65	Facts & Studies	Incinerator Air Emissions	12	0	95	Article
747	65	Facts & Studies	Expanding RFD Concept	10	0	95	Newslttr
1992	65	Facts & Studies	Pursian Gulf Review	8	0	95	Flyer
1870	65	Facts & Studies	Leaker Report from Army	7	10	95	Figues
1572	65	Facts & Studies	A Case Study of Municipal Waste incineration	7	0	95	Report
1867	65	Facts & Studies	Chemical Agent Testing Labs	5	24	95	List
1991	65	Facts & Studies	Agent Orange Review - Volume 11,No.2	5	0	95	Flyer
725	65	Facts & Studies	Rsk Assessment Supprting Chem Demil	1	23	95	Hndout
1638	65	Facts & Studies	Review Comments on PAS Air Filter System	11	14	94	Letter
1573	65	Facts & Studies	Health Assessment Studies	8	0	94	Report
748	65	Facts & Studies	Proposed Cleanup Plans	2	0	94	FactSheet
749	65	Facts & Studies	Explosive Washout Lagoons GW	2	0	94	FactSheet
750	65	Facts & Studies	Explosive Washout Plant	2	0	94	FactSheet

751	65	Facts & Studies	Miscelaneous Sites Operable	2	0	94	FactSheet
752	65	Facts & Studies	SRI Study Sites & PCB Transfrm	2	0	94	FactSheet
753	65	Facts & Studies	Ammunition Demolition Activity	2	0	94	FactSheet
1635	65	Facts & Studies	Effect of Sulfur on Formation of PCDD/PCDF...	5	3	93	Report
1761	65	Facts & Studies	Incineration of Haz.Waste:A critical review...	1	0	93	Report
1575	65	Facts & Studies	Waste Wars:The Army opens new front	4	29	92	Article
1866	65	Facts & Studies	Dioxin Toxicity	6	0	90	Report
754	65	Facts & Studies	Intent to Deny HW Permit	8	30	89	FctSheet
755	65	Facts & Studies	Attached ORD Recommendations	12	7	87	Memo
756	65	Facts & Studies	Arsenic, Toxic Substnces	6	0	87	FctSheet
757	65	Facts & Studies	Pentachlorophenol, Toxic Sub.	6	0	87	FctSheet
758	65	Facts & Studies	Triclopyr, Toxic Substances	6	0	87	FctSheet
759	65	Facts & Studies	PCB Cntmntd M55 Rockt Incin.	3	3	87	FctSheet
760	65	Facts & Studies	Agent Mustard	12	26	86	Info.Sht
761	65	Facts & Studies	Carcinogens in Drnk H2O Stndrds	8	21	86	Report
762	65	Facts & Studies	Bubbler Adsorption System	3	24	86	FactSheet
763	65	Facts & Studies	Liquid Incinerator Agnt Incinertn Tsts	2	0	86	Results
764	65	Facts & Studies	Lt Review of Thrml Decompostn Studies of Agnt	8	24	84	Rvw
2120	65	Facts & Studies	OR Dept of Veterans Affairs, Agent Orange	5	0	84	Guide
765	65	Facts & Studies	Nerve Agents Hndout #2	0	0	0	Hndout
766	65	Facts & Studies	HW Management Facility Permit	0	0	0	FactSheet
1990	65	Facts & Studies	Eval.& treatment of Post-traumatic stress...	0	0	0	Flyer
2163	70	News Articles	Kuma, EQC-pm	11	22	96	NewsArt
2018	70	News Articles	"Burn weapons at Umatilla"	11	21	96	NewsArt
2019	70	News Articles	"Weapons incineration - Burning questions"	11	21	96	NewsArt
2020	70	News Articles	"DeFazio opposes weapons incinerator"	11	21	96	NewsArt
2021	70	News Articles	"DeFazio opposes weapons burning"	11	21	96	NewsArt
2015	70	News Articles	"State may not approve Army's plan to incin...	11	17	96	NewsArt
2016	70	News Articles	"State considers neutralization of mustard gas	11	17	96	NewsArt
2013	70	News Articles	"Details may delay permits for incinerator"	11	16	96	NewsArt
2014	70	News Articles	"State may bar burning of mustard gas supply"	11	16	96	NewsArt
2011	70	News Articles	"Tribes endorse draining rockets"	11	14	96	NewsArt
2012	70	News Articles	"Panel tabs stress as factor in many gulf..."	11	14	96	NewsArt
2010	70	News Articles	"Tribal testimony expected on chem weapons..."	11	12	96	NewsArt
2009	70	News Articles	"Schools fault CSEPP communication"	11	5	96	NewsArt
1994	70	News Articles	"Final hearings on disposal of nerve,mustard..	11	4	96	NewsArt
2008	70	News Articles	"Destroy the us chemical weapons stockpile"	11	1	96	WWWArt
2006	70	News Articles	"Hermiston wants US money to deal with..."	10	25	96	NewsArt
2007	70	News Articles	"Umatilla tribes, US Army paln to confer..."	10	25	96	NewsArt
2003	70	News Articles	"Umatilla Chem Depot to dedicate treatment..."	10	24	96	NewsArt
2004	70	News Articles	"Storing chemical weapons risky"	10	24	96	NewsArt
2005	70	News Articles	"Study: Disposal of chemicals safer"	10	24	96	NewsArt
2002	70	News Articles	"Study: Disposal safest choice"	10	23	96	NewsArt
2001	70	News Articles	"Agreement ensures Tribes and Army will keep..	10	18	96	NewsArt
2000	70	News Articles	"Army official outlines CSEPP changes"	10	17	96	NewsArt
1999	70	News Articles	"No 'leakers' found last quarter at Army Depot	10	14	96	NewsArt

2134	70	News Articles	Video Tape: Nervous Alternatives	10	13	96	Video
1998	70	News Articles	"NRC favors incineration of stockpile"	10	8	96	NewsArt
1871	70	News Articles	"Utah town grows despite chem weapons plant"	10	6	96	NewsArt
1997	70	News Articles	"Safety remains key in Depot's plans"	10	0	96	NewsArt
1872	70	News Articles	"Study suggests destroying chem weapons with..	9	25	96	NewsArt
1873	70	News Articles	"DOE says waste fr.Tennessee will go to Idaho"	9	24	96	NewsArt
1874	70	News Articles	"Clinton orders disposal assessment"	9	20	96	NewsArt
1875	70	News Articles	"Way clearing for emergency center"	9	20	96	NewsArt
1806	70	News Articles	"Politics bog treaty to ban chemical arms"	9	13	96	NewsArt
1995	70	News Articles	"Bayh says Army should consider options..."	9	12	96	NewsArt
1758	70	News Articles	"In Hermiston, all eyes are on Utah"	9	5	96	NewsArt
1805	70	News Articles	"Chem Weapons: Army Resumes Incineration at...	9	3	96	PressRls
1996	70	News Articles	"Taking out the trash, Chemical Weapon Style"	9	0	96	Newsltr
1756	70	News Articles	"Other methods could sidestep incineration"	8	31	96	NewsArt
1757	70	News Articles	"Senator criticizes proposal to ship..."	8	31	96	NewsArt
1750	70	News Articles	"Investigation team dispatched to Tooele"	8	27	96	NewsArt
1751	70	News Articles	"Large crowd voices support for Army's..."	8	27	96	NewsArt
1752	70	News Articles	"The paper farmer"	8	27	96	NewsArt
1756	70	News Articles	"Leak halts incineration at Tooele,Utah"	8	27	96	NewsArt
1754	70	News Articles	"Incinerator leak under study"	8	27	96	NewsArt
1747	70	News Articles	"Leak detected at Tooele burner"	8	26	96	NewsArt
1748	70	News Articles	"Leak halts weapons incineration"	8	26	96	NewsArt
1749	70	News Articles	"Gas leak halts chemical weapons incineration"	8	26	96	NewsArt
1746	70	News Articles	"Umatilla's Deadly Dilemma"	8	25	96	NewsArt
1744	70	News Articles	"Chemical burn ground-rules aired"	8	24	96	NewsArt
1745	70	News Articles	"Commission works toward permit decision"	8	24	96	NewsArt
1738	70	News Articles	"Most at hearing endorse incineration"	8	23	96	NewsArt
1740	70	News Articles	"Chemicals:State will assess burner's..."	8	23	96	NewsArt
1741	70	News Articles	"Burning begins at Tooele"	8	23	96	NewsArt
1742	70	News Articles	"Oregon officials visit Umatilla Depot"	8	23	96	NewsArt
1743	70	News Articles	"Army burns chemical weapons"	8	23	96	NewsArt
1714	70	News Articles	"New Gulf War chemical report issued"	8	22	96	NewsArt
1733	70	News Articles	"Incineration begins on stockpile"	8	22	96	NewsArt
1734	70	News Articles	"Incineration of chemical weapons starts"	8	22	96	NewsArt
1735	70	News Articles	"Hearing tonight for depot burn plan"	8	22	96	NewsArt
1736	70	News Articles	"Chemical weapons set for burning"	8	22	96	NewsArt
1737	70	News Articles	"The EQC will meet..."	8	22	96	NewsArt
1685	70	News Articles	"Army site in Utah will start burning chem..."	8	21	96	NewsArt
1731	70	News Articles	"Army set to fire up Utah incinerator"	8	21	96	NewsArt
1732	70	News Articles	"Utah incinerator set to start burning...	8	21	96	NewsArt
1684	70	News Articles	"Commission needs straight answers..."	8	20	96	NewsArt
1726	70	News Articles	"Surveys:Most people confident of incineration	8	20	96	NewsArt
1727	70	News Articles	"Public comment sought on incineration"	8	20	96	NewsArt
1728	70	News Articles	"Public has chance to weigh in on Army's..."	8	20	96	NewsArt
1730	70	News Articles	"Judge refuses to block start up of Utah incin	8	20	96	NewsArt
1725	70	News Articles	"Army to answer depot questions"	8	19	96	NewsArt

1682	70	News Articles	"Earlier Polls Were Better" - Stuart Dick	8	17	96	NewsArt
1723	70	News Articles	"Judge allows weapons incineration"	8	15	96	NewsArt
1724	70	News Articles	"Utah allowed to burn weapons"	8	15	96	NewsArt
1680	70	News Articles	"Judge rejects incineration hold"	8	14	96	NewsArt
1721	70	News Articles	"Judge won't halt weapons incinerator"	8	14	96	NewsArt
1678	70	News Articles	"Sealed Tight-DEQ say nerve gas incin.risk..."	8	13	96	NewsArt
1679	70	News Articles	"Army to answer Depot questions"	8	13	96	NewsArt
1677	70	News Articles	"Poll gives new take on Depot attitudes"	8	10	96	NewsArt
1719	70	News Articles	"Tri-Citians have fewer fears of depot plans"	8	10	96	NewsArt
1676	70	News Articles	"Weapons Diposal Guidelines Outlined"	8	6	96	NewsArt
1717	70	News Articles	"Depot information effort has fallen short"	8	1	96	NewsArt
1718	70	News Articles	"DEQ sets meetings on incineration"	8	1	96	NewsArt
1648	70	News Articles	"Public Wary of Army plans"	7	30	96	NewsArt
1715	70	News Articles	"Debate over chemical leaks heats up"	7	27	96	NewsArt
1716	70	News Articles	"More detailed picture of 'leakers' emerges	7	27	96	NewsArt
1647	70	News Articles	"Weapons incineration report risk data rlsed..	7	24	96	NewsArt
1646	70	News Articles	"Whistleblower testifies in Army incinerator..	7	23	96	NewsArt
1640	70	News Articles	"Army:Burning best for nerve gas"	7	12	96	NewsArt
1641	70	News Articles	"Unfiltered testimony-public deserves..."	7	12	96	NewsArt
1642	70	News Articles	"US Army emphatically endorses incineration"	7	12	96	NewsArt
1643	70	News Articles	"Burning best for nerve gas, Army says"	7	12	96	NewsArt
1644	70	News Articles	"Depot burn backers light up meeting w/facts"	7	12	96	NewsArt
1622	70	News Articles	"Concern over depot emergency preparations.."	7	6	96	NewsArt
1621	70	News Articles	"Stay put if nerve gas accident occurs..."	7	5	96	NewsArt
1618	70	News Articles	"Officials advise staying put in a release.."	7	4	96	NewsArt
1619	70	News Articles	"Kitzhaber questions depot safety"	7	4	96	NewsArt
1620	70	News Articles	"Gov.Kitzhaber questions weapons depot..."	7	4	96	NewsArt
1876	70	News Articles	"Weapons depot raises fears"	7	4	96	NewsArt
1616	70	News Articles	"Judge throws out 7 counts in Tooele..."	7	2	96	NewsArt
1617	70	News Articles	"Incinerator Lawsuit"	7	2	96	NewsArt
1615	70	News Articles	"More plutonium may have escaped Hanford"	7	1	96	NewsArt
1614	70	News Articles	"'Shelter in place'touted as best reaction.."	6	29	96	NewsArt
1613	70	News Articles	"Utah approves chemical incineration"	6	27	96	NewsArt
1612	70	News Articles	"Army aboveboard"	6	25	96	NewsArt
1591	70	News Articles	"Objectivity depends on your distance..."	6	20	96	NewsArt
1877	70	News Articles	"County officials return w/confidence in..."	6	18	96	NewsArt
1590	70	News Articles	"Army releases impact statement"	6	15	96	NewsArt
2128	70	News Articles	Weapons Incinerator Comment Period Extended	6	15	96	NewsArticle
1589	70	News Articles	"Questions remained unanswered"	6	12	96	NewsArt
1588	70	News Articles	"Incineration plan concerns voiced"	6	11	96	NewsArt
1587	70	News Articles	"Living with uncertainty in Army Depot's..."	6	10	96	NewsArt
1586	70	News Articles	"Hermiston incineration hearing scheduled"	6	8	96	NewsArt
1545	70	News Articles	"Kitzhaber Delays permits on depot's burning..	6	5	96	NewsArt
1543	70	News Articles	"Around the Northwest"	5	29	96	Cable Brief
1544	70	News Articles	"Chemical Weapons Controversy"	5	29	96	NewsArt
1541	70	News Articles	"New Members join chemical advisory group"	5	27	96	NewsArt

1542	70	News Articles	"Oregon becomes hot spot of tourist industry"	5	27	96	NewsArt
1539	70	News Articles	"Examine Alternatives"	5	24	96	NewsArt
1878	70	News Articles	"DEQ assessment right on" - Jack Blackwell	5	21	96	NewsArt
1525	70	News Articles	"Depot disposal plan attacked"	5	18	96	NewsArt
1524	70	News Articles	"Incineration Alternatives discussed"	5	17	96	NewsArt
1879	70	News Articles	Cartoon of chemical demilitarization issue	5	16	96	NewsArt
1523	70	News Articles	"Incineration foes, friends, speak minds..."	5	14	96	NewsArt
1522	70	News Articles	"Comment sought on Depot Plan"	5	11	96	NewsArt
1521	70	News Articles	"If disaster struck Umatilla Depot"	5	10	96	NewsArt
1520	70	News Articles	"Army Study: Chem weapons stable"	5	4	96	NewsArt
1519	70	News Articles	"Incineration office to open"	5	1	96	NewsArt
1881	70	News Articles	"Don't delay nerve gas disposal"	4	28	96	NewsArt
1518	70	News Articles	"Incineration friends and foes"	4	27	96	NewsArt
1517	70	News Articles	"Army gets ready to burn cache of chemical..."	4	19	96	NewsArt
1516	70	News Articles	"EPA Proposing changes to screen cancer..."	4	16	96	NewsArt
1485	70	News Articles	"Commission plans tour of Tooele incinerator"	4	13	96	NewsArt
1515	70	News Articles	"Treatment Storage of Chemicals Weapons..."	4	12	96	MagArt
1484	70	News Articles	"Dueling Studies add to the controversy"	4	10	96	NewsArt
1514	70	News Articles	"Chemical weapons battle off to court"	4	10	96	NewsArt
1483	70	News Articles	"State study:Incineration poses no risks"	4	9	96	NewsArt
1482	70	News Articles	"Researcher says incineration increases risk"	4	8	96	NewsArt
1450	70	News Articles	"Time to move on Depot"	4	6	96	NewsArt
1451	70	News Articles	"Burning gas risky, Umatilla study says"	4	6	96	NewsArt
1446	70	News Articles	"Reservation not a depot disaster evac. zone"	4	5	96	NewsArt
1448	70	News Articles	"Consider Army's record"	4	5	96	NewsArt
1449	70	News Articles	"Express your opinions about chemical..."	4	5	96	NewsArt
1445	70	News Articles	"Governor,Tribes talk incineration"	4	4	96	NewsArt
1444	70	News Articles	"Don't rush gas disposal"	4	1	96	NewsArt
1443	70	News Articles	"Testimony in whistleblower hearing..."	3	30	96	NewsArt
1442	70	News Articles	"Tribes astonished by gas burning plan"	3	29	96	NewsArt
1441	70	News Articles	"Tribes blast Army evacuation plan"	3	28	96	NewsArt
1438	70	News Articles	"Tooele Safety attitudes attacked"	3	27	96	NewsArt
1439	70	News Articles	"NRC Reviews Tooele incinerator"	3	27	96	NewsArt
1440	70	News Articles	"Make deliberate decision regarding..."	3	27	96	NewsArt
1401	70	News Articles	"Kitzhaber may slow papers for Army..."	3	26	96	NewsArt
1437	70	News Articles	"Gov. would consider some burner delay"	3	26	96	NewsArt
1481	70	News Articles	"Terrifying cache faces destruction"	3	26	96	NewsArt
1435	70	News Articles	"Army hopes to fire up chemical wheapons..."	3	25	96	NewsArt
1436	70	News Articles	"Incinerator complaints to be aired"	3	25	96	NewsArt
1396	70	News Articles	"Community's silence deafening on Army's..."	3	19	96	NewsArt
1397	70	News Articles	"AG quashes incinerator moratorium"	3	19	96	NewsArt
1398	70	News Articles	"Morrow Co. residents file for commission..."	3	19	96	NewsArt
1399	70	News Articles	"Army outreach office benefits for both..."	3	19	96	NewsArt
1400	70	News Articles	"Army opens outreach office"	3	19	96	NewsArt
1395	70	News Articles	"Umatilla Army Depot staff hunts leakers"	3	16	96	NewsArt
1434	70	News Articles	"N-waste conversion into glass begins"	3	13	96	NewsArt

1252	70	News Articles	"Burn that poison gas"	3	11	96	NewsArt
1251	70	News Articles	"State, county discuss dispute over CSEPP"	3	9	96	NewsArt
1433	70	News Articles	"There's no need for haste on nerve gas..."	3	9	96	NewsArt
1250	70	News Articles	"Kitzhaber may not have power to delay..."	3	4	96	NewsArt
1394	70	News Articles	"Tooele Looses Support"	3	4	96	Mag Art
1199	70	News Articles	"Stop stalling, burn the stuff"	3	1	96	NewsArt
1200	70	News Articles	"State won't make quick decision..."	3	1	96	NewsArt
1249	70	News Articles	"Destroy Umatilla weapons"	3	1	96	NewsArt
1170	70	News Articles	"Ore+D2126 congressman asks Governor to halt w	2	26	96	NewsArt
1197	70	News Articles	"War of Words"	2	24	96	NewsArt
1198	70	News Articles	"No More Hermiston"	2	24	96	NewsArt
1193	70	News Articles	"Weapons burning spurs concern"	2	23	96	NewsArt
1194	70	News Articles	"Governor asked to delay weapons-burning plans	2	23	96	NewsArt
1195	70	News Articles	"Governor asked to delay weapons burning"	2	23	96	NewsArt
1196	70	News Articles	"DeFazio adds his voice to request..."	2	23	96	NewsArt
1248	70	News Articles	"Nerve gas burning plan fuels debate"	2	23	96	NewsArt
1192	70	News Articles	"Mayors Call for Incinerator Action"	2	22	96	NewsArt
1247	70	News Articles	"Mayors rally around depot weapons burn"	2	22	96	NewsArt
1246	70	News Articles	"Delay warranted for incinerator at UAD"	2	21	96	NewsArt
1243	70	News Articles	"Cynicisn enhanced"	2	20	96	NewsArt
1244	70	News Articles	"Mayor eyes support for burning weapons"	2	20	96	NewsArt
1245	70	News Articles	"'Time Out': Tribes seek halt to incin.plan...	2	20	96	NewsArt
1242	70	News Articles	"DEQ forges ahead on incinerator review"	2	17	96	NewsArt
1241	70	News Articles	"Tribes seek incinerator moratorium"	2	15	96	NewsArt
1240	70	News Articles	"Incineration Debate filled w/misinformation"	2	13	96	NewsArt
1171	70	News Atricles	"Chemical Time Bombs"	2	12	96	NewsArt
1172	70	News Artilces	See Various Highlighted Articles	2	9	96	MagArt
1393	70	News Articles	"The Military's Mess - Johnston Atoll..."	2	0	96	Mag Art
1065	70	News Articles	"Binary Weapons"	1	25	96	NewsArt
1064	70	News Articles	"DEQ briefed on weapons incineration"	1	12	96	NewsArt
1060	70	News Articles	"Chemical agent leaks at Umatilla"	1	10	96	NewsArt
1063	70	News Articles	"Army Analyzing Cost,benefits of using enzymes	1	8	96	MagArt
1040	70	News Articles	"Tooele whistleblower truns attention to UAD"	1	1	96	NewsArt
1062	70	News Articles	"Whistle-blower paints deadly scenario"	12	31	95	NewsArt
1061	70	News Articles	"State Begins Assesment of Incinerator Risks"	12	28	95	NewsArt
1189	70	News Articles	"Chem weapons whistleblower sched for court...	12	27	95	MagArt
1257	70	News Articles	"Indian Tribe Rejects Navy offer for..."	12	27	95	MagArt
767	70	News Articles	"Utah officials question start up date..."	12	5	95	MagArt
1432	70	News Articles	"Lets not rush when our health is on the line"	12	5	95	NewsArt
1431	70	News Articles	"Nerve gas incinerator const. contract near"	11	30	95	NewsArt
1038	70	News Articles	"Residents agree toxins must go,disagree..."	11	29	95	NewsArt
1430	70	News Articles	"We need dose of truth" - 'Dutch' Meyers	11	29	95	NewsArt
1585	70	News Articles	"Nerve gas incinerator plans studied again"	11	16	95	NewsArt
768	70	News Articles	"Army looks at new ways to destroy nerve gas"	11	15	95	NewsArt
1258	70	News Articles	"US-Russian Chem Weapons Incineration..."	11	15	95	MagArt

1191	70	News Articles	"Exhuming the Cold War's Deadly Crypts"	11	12	95	NewsArt
769	70	News Articles	"Army chem incinerator faces two hurdles"	11	5	95	NewsArt
770	70	News Articles	"Greatest risk is waiting" - Frank Harkenrider	11	4	95	NewsArt
771	70	News Articles	"Opponents challenge nerve gas incineration"	11	4	95	NewsArt
772	70	News Articles	"Incinerator must pass 2 environmental reviews	11	3	95	NewsArt
1039	70	News Articles	"Army pursues bioremediation on explosives..."	11	0	95	MagArt
773	70	News Articles	"DEQ calls hearings on plan for incinerator...	10	26	95	NewsArt
774	70	News Articles	"Jones to attend environment conference"	10	16	95	NewsArt
775	70	News Articles	"Law group to file suit over planned army..."	10	4	95	MagArt
776	70	News Articles	"The nerve gas incineration merry-go-round"	7	21	95	NewsArt
1880	70	News Articles	"Lt.Col.Marie Baldo takes over"	7	20	95	NewsArt
1403	70	News Articles	"Funding approved for Army incinerator"	6	20	95	NewsArt
777	70	News Articles	"It'd be quicker & safer to reconfigure M-55s	5	15	95	NewsArt
778	70	News Articles	"Hot water,sludge may be answer to mustard gas	5	9	95	NewsArt
1402	70	News Articles	"New process tested for destroying mustard.."	5	8	95	NewsArt
779	70	News Articles	"Weapons vapor leaks found"	3	29	95	NewsArt
780	70	News Articles	"Incineration said unsafe at any speed"	3	28	95	NewsArt
781	70	News Articles	"EPA fines Army over nerve gas safety error"	3	17	95	NewsArt
782	70	News Articles	"Nerve gas release nets fine"	3	16	95	NewsArt
783	70	News Articles	"Army responds to EPA citation"	3	14	95	PressRls
784	70	News Articles	"GAO faults Army on nerve gas plans"	3	2	95	NewsArt
785	70	News Articles	"Ore.group defends storage of nerve gas"	2	22	95	NewsArt
786	70	News Articles	"Stop Incineration" - Stuart Dick	2	4	95	NewsArt
787	70	News Articles	"Depot workers face renewed layoff threat"	2	3	95	NewsArt
788	70	News Articles	"Weapons threat exists either way"	1	31	95	NewsArt
1639	70	News Articles	"Army Releases Report on M55 rocket storage.."	1	23	95	NewsRls
789	70	News Articles	"Umatilla Depot Plan Risky, GAO says"	1	17	95	NewsArt
790	70	News Articles	"Gas Pains"	11	16	94	NewsArt
791	70	News Articles	"If You Hear the Alarm..."	10	31	94	MagArt
792	70	News Articles	Speedy St Prmt Eludes Army Inc	10	25	94	NewsArt
793	70	News Articles	"Army Wants Hastened Inc Apprl"	10	19	94	NewsArt
794	70	News Articles	"Inc Go Despite Lack of Permit"	10	18	94	NewsArt
795	70	News Articles	"Cold War Cleanup Frustrating"	10	16	94	NewsArt
796	70	News Articles	"Army Hopes to Speed Work Inc"	10	13	94	NewsArt
797	70	News Articles	"House to Incestigate Utah..."	9	27	94	NewsArt
798	70	News Articles	"Army Invest Conditions @Tooele"	9	24	94	NewsArt
799	70	News Articles	"Challenging Incineration"	9	22	94	NewsArt
800	70	News Articles	"Turning Closure to Opporunity"	9	22	94	NewsArt
801	70	News Articles	"Incinerator Success Argued"	9	21	94	NewsArt
802	70	News Articles	"Incinerator Funding Delayed"	9	21	94	NewsArt
2132	70	News Articles	"M-55 Rocket Cause for Concern"	9	21	94	NewsArt
803	70	News Articles	"UT Incinerator Ready to Burn"	9	20	94	NewsArt
804	70	News Articles	"Tooele, UT Strikingly Similar	9	20	94	NewsArt
2133	70	News Articles	Incinerator will Bring Good Jobs to Area	9	20	94	NewsArt
805	70	News Articles	"Evidence Shows Clear..."	9	12	94	NewsArt
806	70	News Articles	"Army Data was a Surprise"	9	10	94	NewsArt

807	70	News Articles	"Tiny Leaks Found..."	9	7	94	NewsArt
808	70	News Articles	"Nerve Gas Leaks in Bunker"	9	7	94	NewsArt
809	70	News Articles	"Playing Chicken w/Chem Weap"	9	1	94	NewsArt
810	70	News Articles	"Army Owes Us Answers"	8	17	94	NewsArt
811	70	News Articles	"Risk of Weapons Lowered"	8	11	94	NewsArt
812	70	News Articles	"Weap Incineration Permitting"	7	1	94	MagARt
813	70	News Articles	"Alternatives To Burning"	6	30	94	NewsArt
814	70	News Articles	"1995 Too Optimistic"	6	29	94	NewsArt
815	70	News Articles	"..Recognize Danger of Delay?"	6	8	94	NewsArt
816	70	News Articles	"Incin Eff Not Like Russia's"	5	25	94	NewsArt
817	70	News Articles	"Incinerator Delays-Big Risk"	5	24	94	NewsArt
818	70	News Articles	"In Disposing of Posion Gas"	5	22	94	NewsArt
819	70	News Articles	Mustard-gas tab: $1 billion	5	22	94	NewsArt
820	70	News Articles	State May Decide Fate	5	18	94	MagArt
821	70	News Articles	"Inc Study Skips Crucial Data"	5	11	94	NewsArt
822	70	News Articles	"DEQ Opens Hermiston Office"	5	6	94	NewsArt
823	70	News Articles	"DEQ Opens Office -Depot Proj"	5	6	94	NewsArt
824	70	News Articles	"The Env: A Growth Industry"	5	1	94	MagArt
825	70	News Articles	"Incinerator Seems to be OK.."	4	26	94	NewsArt
826	70	News Articles	"Inc Should Proceed Nerve Gas"	4	26	94	NewsArt
828	70	News Articles	"Plan- Burn Chem Divides Herm"	4	14	94	NewsArt
829	70	News Articles	"Incineration Support Tabled"	3	31	94	NewsArt
830	70	News Articles	"Critique of Incin Proposal"	3	18	94	MagArt
831	70	News Articles	"Mock Army Depot Disaster Test"	3	10	94	NewsArt
832	70	News Articles	Risk Assessment Methods	2	4	94	MagArt
833	70	News Articles	Inc Permits Demand New Tactics	2	1	94	MagArt
834	70	News Articles	"A Burning Question"	12	12	93	NewsArt
835	70	News Articles	"Tips on Fleeing Home"	12	12	93	NewsArt
836	70	News Articles	Affidavit of Publication	12	28	92	Affidavit
837	70	News Articles	Affidavit of Publication	12	15	92	Affidavit
838	70	News Articles	Cntmnte Crops, Hrt Economy	11	17	92	NewsArt
839	70	News Articles	Zapping Old Chem Weapons More Than a Burning Q	7	8	92	NewsArt
840	70	News Articles	Incinerators Spark Fears	6	9	92	NewsArt
841	70	News Articles	Weapons Burning Discussed Tonight	3	17	92	NewsArt
844	70	News Articles	Storing Aging Chemicals	10	31	91	NewsArt
845	70	News Articles	Chem Weapons Disposal Prog in Doubt	5	31	91	NewsArt
846	70	News Articles	US Plan to Burn Chem Weapons Strs Pblc Fear	5	2	91	NewsArt
847	70	News Articles	Altntv Evactn Hazmat Emerg.	12	0	90	NewsArt
848	70	News Articles	Weapons Destruction Expensive	11	18	90	NewsArt
849	70	News Articles	Johnston Atoll	11	12	90	NewsArt
850	70	News Articles	US Hlping Sviets Destroy Poisn	6	8	90	NewsArt
851	70	News Articles	Nuclear Weapons Reduction	6	2	90	NewsArt
852	70	News Articles	Cleanup for Depot Soil	12	27	89	NewsArt
853	70	News Articles	Public Health Protection	10	0	89	NewsArt
854	70	News Articles	Incineration Rouses Opposition	9	26	89	NewsArt
855	70	News Articles	Beyond Waste: Assurance Plan	9	0	89	NewsArt

856	70	News Articles	Court Rules States May Not Recover Penalties	2	28	89	Litigatn
857	70	News Articles	Weapons Incinerator Public Use	2	20	89	NewsArt
858	70	News Articles	Incinerator for Nerve Gas Only	2	17	89	NewsArt
859	70	News Articles	Stringent Oprtn Assured Dispsl of Chem Agnts	2	17	89	NewsArt
860	70	News Articles	Incin Plan Brings Criticism	2	16	89	NewsArt
861	70	News Articles	Loss of Civilian Jobs	12	30	88	NewsArt
1238	70	News Articles	"Army Cautious on Shipping Aberdeen Toxins"	11	30	88	NewsArt
862	70	News Articles	Defense Firms win Major Legal Victory	6	28	88	NewsArt
863	70	News Articles	Chemical Weapons up in Smoke	6	0	88	NewsArt
864	70	News Articles	State Fears Losing Role in Cleanup at Hanfrd	4	7	88	NewsArt
865	70	News Articles	Extend Chem. Arms Deadline	3	18	88	NewsArt
866	70	News Articles	Quandary at Aberdeen	3	15	88	NewsArt
867	70	News Articles	Army to Burn Chem Agnts Aberdn	2	24	88	NewsArt
868	70	News Articles	Delay in Plans to Burn Arms	2	1	88	NewsArt
869	70	News Articles	Lugar is Against Nerve Gas Pln	1	26	88	NewsArt
870	70	News Articles	Nerve Gas Burner Coming?	1	8	88	NewsArt
873	70	News Articles	Incinerate On-Site	5	26	87	NewsArt
874	70	News Articles	Witnsses Fght Pln Brn Chem Arm	3	4	87	NewsArt
891	70	News Articles	Report to EPA on Johnston Islnd Strge Incdnt	3	2	87	NewsArt
875	70	News Articles	Nerve Gas Inspection Lagging	2	5	87	NewsArt
876	70	News Articles	Disposal of Chemical Munitions	7	0	85	NewsArt
878	70	News Articles	Nerve Gas Poisoning in Sheep	4	15	70	NewsArt
879	70	News Articles	Dugway Accident, Sheep Kill	12	27	68	NewsArt
880	70	News Articles	"America's Toxic Messes"	10	5	0	NewsArt
881	70	News Articles	Depot Checks Weapons Weekly	0	0	0	NewsArt
882	70	News Articles	Incinerate Poison Gas	0	0	0	NewsArt
883	70	News Articles	Long-Term Strge Incrses Danger	0	0	0	NewsArt
884	70	News Articles	Incin. Safe, Pivotal Year	0	0	0	NewsArt
885	70	News Articles	Army on Hot Seat for Hazardous Waste Plan	0	0	0	NewsArt
888	70	News Articles	Closing of Fort McClellan	0	0	0	NewsArt
889	70	News Articles	Military HW Escape Rules	0	0	0	NewsArt
890	70	News Articles	Browder to Fight Weapons Disposal	0	0	0	NewsArt
1889	75	Public Outreach	Pres.executive order forces army's hand...	9	18	96	NewsRls
1722	75	Public Outreach	"The EQC will host 2 days of meetings..."	8	15	96	RadioNews
1681	75	Public Outreach	"Utah chemical arms destruction to start..."	8	14	96	NewsRls
1720	75	Public Outreach	"Torch it."	8	12	96	RadioNews
1888	75	Public Outreach	Chem Weap:New Army info shows leaks not increa	7	31	96	PressRls
1645	75	Public Outreach	"State officials admit to supressing..."	7	23	96	NewsRls
1887	75	Public Outreach	Bayh says army should consider options...	7	12	96	PressRls
1807	75	Public Outreach	Stop Chem Weapons incineration in Oregon	7	5	96	Flyer
1549	75	Public Outreach	Greenlaw Injunction at Tooele	6	12	96	Memo
1766	75	Public Outreach	Governor supports more public comment on...	6	4	96	PrsRelease
1546	75	Public Outreach	Greenpeace Documents	6	3	96	Documents
2036	75	Public Outreach	Chemical Weapons Controversy-News release	5	29	96	NewsRls
1576	75	Public Outreach	New report debunks myth on state incineration	5	22	96	Article
1886	75	Public Outreach	Action Alert	5	16	96	Flyer

1239	75	Public Outreach	"US-Russian activists issue statement on ..."	10	25	95	MagArt
1762	75	Public Outreach	Open Forum-Hermiston Community Center-11/2/95	10	12	95	MtgNotice
1764	75	Public Outreach	ChemDemil, Reviewing Alt Tech of Chem.Weapons	10	0	95	Flyer
892	75	Public Outreach	Chem. Agent Stockpile Incinerat	5	26	95	Letter
893	75	Public Outreach	CDCAC Meeting Notice	3	2	95	Notice
1763	75	Public Outreach	Medical Prep.for areas near chem.weapons sites	0	0	95	Flyer
1067	75	Public Outreach	Community Surveys by Army	11	1	94	Report
1885	75	Public Outreach	Demilitarization on Chemical Weapons	5	0	94	Brochure
1765	75	Public Outreach	Demilitarization of Chemical Weapons	8	0	93	Flyer
894	75	Public Outreach	A Chance to Comment On:D2135 Closure	1	22	93	Flyer
895	75	Public Outreach	A Chance to Comment On: Closure	12	27	91	Flyer
896	75	Public Outreach	A Chance to Comment On. Clsre	9	7	90	Flyer
897	75	Public Outreach	Intent to Jointly Deny Permit	8	30	89	Notice
898	75	Public Outreach	Public Info Needs Assessment	10	9	87	Report
899	75	Public Outreach	Radio Deny HW Treatmnt Permit	0	0	0	Announcemnt
913	75	Public Outreach	US Chem Warfare Stockpiles	0	0	0	Flyer
1882	75	Public Outreach	Monitoring Chemical Agents	0	0	0	Flyer
1883	75	Public Outreach	Chemical Weapons Incinerators	0	0	0	Flyer
1884	75	Public Outreach	Alt Methods of Disposing of stockpiled...	0	0	0	Flyer
2038	76	Pub Outreach/Army	Public notice of public comment period closure	11	12	96	Notice
2037	76	Pub Outreach/Army	Tooele Bi-Weekly update #2	11	7	96	PressRls
1890	76	Pub Outreach/Army	Updates and Happenings at UAD	10	3	96	Letter
1809	76	Pub Outreach/Army	Alt. Tech. program evaluation report	9	11	96	Report
2039	76	Pub Outreach/Army	"Continental Chemical Weapons Disposal begins"	9	0	96	Newsltr
1755	76	Pub Outreach/Army	"Disposal operations to resume at the Tooele..	8	30	96	PressRls
1842	76	Pub.Outreach/Army	News Release re: Tooele release	8	25	96	NewsRls
1892	76	Pub Outreach/Army	Chemical Event at Anniston Army Depot	8	11	96	Media Advis
1649	76	Pub Outreach/Army	Alternative Tech. Outreach Materials	7	11	96	Brochures
1623	76	Pub Outreach/Army	Press release-Utah approves disposal permit	6	26	96	Pressrls
1808	76	Pub Outreach/Army	Umatilla Area Baseline Survey	4	0	96	Report
1212	76	Pub Outreach/Army	"Army Destroys Agent-Filled Bombs..."	3	1	96	NewRls
1404	76	Pub Outreach/Army	Chem Demil Update Volume 4, Issue 1	3	0	96	Publication
1068	76	Pub Outreach/Army	Chemical Weapons Stockpile Declassified	1	22	96	Report
900	76	Pub Outreach/Army	Chem Demil Update:Army Wrkshop	11	0	95	Flyer
901	76	Pub Outreach/Army	Chem Demil Update:JACADS M-55	9	0	95	Flyer
1174	76	Pub Outreach/Army	Chemical Event at Anniston Army Depot	8	1	95	Notice
902	76	Pub Outreach/Army	Chem Demil Update:Commnty Voice	7	0	95	Flyer
903	76	Pub Outreach/Army	Chem Agent Detected	5	9	95	Advsry
904	76	Pub Outreach/Army	Chem. Demiltrztn Update	5	1	95	Flyer
905	76	Pub Outreach/Army	CSEPP Exercise	4	10	95	Exrcse
906	76	Pub Outreach/Army	Chem Demilitrztn Remedtn Actvty	3	2	95	Hndout
908	76	Pub Outreach/Army	Detects Trace Amt of Chem Agnt	2	2	95	NewsRels
907	76	Pub Outreach/Army	Chem Demilitrization Update	2	0	95	Handout
909	76	Pub Outreach/Army	Quick Facts	10	25	94	Fax
910	76	Pub Outreach/Army	Demil Prog Under Singl Command	10	1	94	Flyer
911	76	Pub Outreach/Army	Release Rprt on Alter Techn	4	1	94	Flyer

912	76	Pub Outreach/Army	What's Stored at Umatilla	0	0	0	Flyer
1173	76	Pub Outreach/Army	JACADS - Johnston Atoll Chemical Agent Disp.	0	0	0	Brochure
2041	77	Pub Outreach/DEQ	UAD Community Assessment Tracking Survey"	7	0	96	Report
1488	77	Pub Outreach/DEQ	Meeting Notice Open House 4-27-96	4	22	96	Notice
1891	77	Pub Outreach/DEQ	Pub comment opens on proposed UAD incinerator	4	3	96	NewRlse
1405	77	Pub Outreach/DEQ	EQC UAD Briefings for chem weapon facility	3	26	96	Notice
2307	77	Pub Outreach/DEQ	Open Forum-Risk Assessment	11	2	95	Cassette
2308	77	Pub Outreach/DEQ	Open Forum-Risk Assessment	11	2	95	Cassette
914	77	Pub Outreach/DEQ	Meeting Notice Open Forum	10	12	95	Flyer
915	77	Pub Outreach/DEQ	Fact Sht #4 Risk Assess. Basics	8	10	95	Flyer
916	77	Pub Outreach/DEQ	Mtg. Notice CDCAC	8	2	95	Flyer
917	77	Pub Outreach/DEQ	Topics at Umatilla Pub Out	7	25	95	Hndout
919	77	Pub Outreach/DEQ	Meeting Notice CDCAC	4	5	95	Notice
1486	77	Pub Outreach/DEQ	DEQ to hold open house on proposed UMCDF	11	10	94	Newsrls
1185	77	Pub Outreach/DEQ	UADC Fact Sheet #2 - Environmental Permits	8	0	94	Flyer
918	77	Pub Outreach/DEQ	Hrmstn Progress Report & To Do	5	23	94	Report
920	77	Pub Outreach/DEQ	UADC Weapons Destruction Fact Sheet #1	0	0	0	FctSheet
921	77	Pub Outreach/DEQ	Spanish Fact Sheet	0	0	0	FactSheet
922	77	Pub Outreach/DEQ	DEQ Permits and the Public Process	0	0	0	Hndout
1577	78	Pub Outreach/EPA	Revised Technical Standards for HW Combust.	5	20	96	Memo
1893	78	Pub Outreach/EPA	Strategy Update:HW minimization & combustion	3	0	96	NewsLetter
1187	78	Pub Outreach/EPA	Response to KHarris Letter	2	6	96	Letter
923	78	Pub Outreach/EPA	Waste Minimization	9	1	94	Flyer
2305	78	Pub Outreach/EPA	EPA Admin Announces New HW Rdctn & Cmbstn Stra	5	18	93	Report
924	78	Pub Outreach/EPA	National Priorities List Sites	9	1	91	Flyer
925	78	Pub Outreach/EPA	Design & Constr of RCRA/CERCLA	5	1	91	Fax
1069	78	Pub Outreach/EPA	Understanding Env. Health Risks...	9	0	90	Pamphlet
2083	80	CSEPP	Comments to be entertained by EQC	11	13	96	Letter
2075	80	CSEPP	November 5-6, 1996 Agenda Proposal	10	14	96	Memo
1894	80	CSEPP	Draft UMCD compliance requirements & schedule	10	2	96	List
1895	80	CSEPP	CAIR plan sycronization Time period H(sync 1)	10	1	96	Report
1896	80	CSEPP	Response to G&DNelson 4/11/96 letter	9	23	96	Letter
1698	80	CSEPP	UMCDF OEM Presentation to EQC-invitation	8	16	96	Letter
1699	80	CSEPP	UMCDF OEM Presentation to EQC-invitation	8	16	96	Letter
1700	80	CSEPP	UMCDF OEM Presentation to EQC-invitation	8	16	96	Letter
1701	80	CSEPP	UMCDF OEM Presentation to EQC-invitation	8	16	96	Letter
1702	80	CSEPP	UMCDF OEM Presentation to EQC-invitation	8	16	96	Letter
1697	80	CSEPP	UMCDF OEM Presentation to EQC-invitation	8	15	96	Letter
1810	80	CSEPP	Governor's CSEPP concerns for FEMA and Army	7	1	96	Letter
2081	80	CSEPP	Permit Conditions II.H.4.b and II.H.4.c	6	20	96	Letter
2082	80	CSEPP	Sufficient level of Preparedness now exists	6	17	96	Letter
1624	80	CSEPP	CSEPP National Conference - 5/21-24/96	5	29	96	Memo
1696	80	CSEPP	Emergency Medical Preparedness Plan	5	29	96	Letter
1511	80	CSEPP	CSEPP Hazard Specific Annex to the state EOP	5	15	96	Letter
1898	80	CSEPP	CSEPP Exercise 5/9/95 report	5	14	96	Memo
1695	80	CSEPP	CSEPP Hazard Specific Annex to State EOP	5	13	96	Memo

1899	80	CSEPP	Personal Protective Equipment	5	5	96	Memo
1578	80	CSEPP	CSEPP Exercise, May 1,1996	5	2	96	Memo
1547	80	CSEPP	Chemical Accident/Incident Response Assist...	4	30	96	Report
1897	80	CSEPP	Letter regarding emergency reponse	4	17	96	Letter
1487	80	CSEPP	April 5,96 Meeting Report	4	12	96	Report
1694	80	CSEPP	IRZ/PAZ Census Data	2	21	96	Memo
1213	80	CSEPP	Comments on "Appendix M" draft	2	12	96	Letter
1175	80	CSEPP	Reply to January 23-25 CSEPP Mtg	1	30	96	Letter
1043	80	CSEPP	Appendix M to CSEPP Planning Guidance	1	9	96	Letter
1070	80	CSEPP	Response to request for permit denial	1	9	96	Letter
926	80	CSEPP	Director Opposes Incineration	10	1	95	Article
927	80	CSEPP	Response to Recent Inquires	9	26	95	Memo
928	80	CSEPP	Emergency Public Info. Instrctn	9	25	95	Booklet
929	80	CSEPP	Warning you in an Emergency	9	25	95	Flyer
930	80	CSEPP	Status Update on UADA Progress	9	19	95	Letter
931	80	CSEPP	UMDA Mitigation Program	8	26	95	Memo
932	80	CSEPP	CAIRA Plan Support Requirement	8	16	95	Memo
1691	80	CSEPP	Recovery Presentation/Pendleton	7	12	95	Report
933	80	CSEPP	Reentry/Restoration Symposium	5	25	95	Letter
934	80	CSEPP	Reentry/Restoration Symposium	4	24	95	Letter
1214	80	CSEPP	Chemical Accident/Incident response...	4	24	95	Report
935	80	CSEPP	Issue of PPE	4	10	95	Letter
936	80	CSEPP	Symposium on Recovery Issues	4	5	95	Report
937	80	CSEPP	CDCAC Mtg Handouts	4	5	95	Handouts
938	80	CSEPP	Arrangements for Meeting	2	24	95	Letter
939	80	CSEPP	FY 95 Funds	2	23	95	Letter
940	80	CSEPP	Clarification of a Misundrstnd	2	9	95	Letter
941	80	CSEPP	Briefing on issues of Concern	2	7	95	Letter
1689	80	CSEPP	Emergency Response Concept Plan for CSEPP	1	27	95	Report
1688	80	CSEPP	Planning Guidelines for Recov.Phase Act.-CSEPP	11	22	94	Report
	80	CSEPP	CSEPP Library Materials	7	1	94	Biblio
1687	80	CSEPP	Re-entry/Restoration Plan Workbook	6	0	94	Wrkbk
942	80	CSEPP	Updated Schedules	10	18	93	Rlse/Fax
	80	CSEPP	Env Monitoring Chem. Welfare Agents	10	11	93	Memo
1658	80	CSEPP	Public Opinion Research	10	0	93	Report
943	80	CSEPP	The Facts	6	7	93	Fctsht/Memo
944	80	CSEPP	The Facts	6	1	93	FctSht
945	80	CSEPP	The Facts	4	2	93	FctSht
946	80	CSEPP	The Facts	3	10	93	FctSht
947	80	CSEPP	Calendar, Emerg. Public Info	0	0	93	Calendar
952	80	CSEPP	Emergency Operations Plan CSEPP Appendices	10	23	90	Report
948	80	CSEPP	Technical Orientation Wrkshop	8	24	90	Agenda
949	80	CSEPP	FY 1990 CSEPP CCA Funding	4	17	90	Tables
953	80	CSEPP	Draft Management Plan for Emerg. Response	7	0	89	Report
954	80	CSEPP	Implementing Procedures for Chem Accdnts	4	0	88	Report
955	80	CSEPP	Implementing Procedures for Chem Accdnts	4	0	88	Report

950	80	CSEPP	Record of Decision	2	23	88	Release
956	80	CSEPP	Emergency Response Concept Plan	7	0	87	Report
951	80	CSEPP	Emerg. Prog. Funding Studies	0	0	0	Report
957	80	CSEPP	CSEPP Information Folder	0	0	0	Folder
2077	81	CAIRA Plan & Update	Change 1 to UMCD CAIRA Plan, dated 4/96	7	31	96	Memo
2076	82	CSDP	N. Carolina Protocol for Indirect Exposure RA	8	0	96	Report
958	82	CSDP	CSDP What is it?	1	8	90	Hndout
959	82	CSDP	Update, Response Activities	9	18	89	Memo
960	82	CSDP	RCRA Meeting, CSD, Tooele	11	29	88	Agenda
961	82	CSDP	RCRA Part B App. Tooele Depot	11	3	88	Memo
962	82	CSDP	Implementation Plan	3	15	88	Report
963	82	CSDP	Tech Advisory Comite, Membrshp	6	5	87	Letter
964	82	CSDP	Chem Stockpile Dispodal Study	5	27	87	Letter
965	82	CSDP	CSD Plan Supplement	3	27	87	Letter
1660	82	CSDP	CSDP Draft Programatic EIS	7	1	86	Report
966	82	CSDP	Umatilla Depot Activity Status	0	0	0	Report
967	82	CSDP	Program Overview	0	0	0	Report
968	82	CSDP	The US Chem Stckple Dispsl Prog	0	0	0	Hndout
2103	85	CDCAC	CDCAC Meetings listed as function for DEQ Rqmn	11	13	96	Letter
2104	85	CDCAC	Clarification of CDCAC Mtg listing for DEQ Rqm	11	13	96	Letter
2105	85	CDCAC	Meeting Notice, 11/12/96 in Hermiston	11	12	96	Notice
2106	85	CDCAC	Regarding 10 Min. Prsntatn by Karyn Jones	10	24	96	Memo
2107	85	CDCAC	Orientation for New Executives/Brd/Commmssn Me	10	10	96	Memo
2108	85	CDCAC	Transmittal of Review & Eval of Alt Tech Rpt	10	10	96	Memo
1905	85	CDCAC	Oct 7, 1996 CDCAC Meeting Notice	10	7	96	Notice
2129	85	CDCAC	Remarks of Dr. R Magee Before CDCAC 10/7/96	10	7	96	Remarks
1904	85	CDCAC	Transmittal of NRC "Review & Eval of Alt Tech"	9	26	96	Memo
2109	85	CDCAC	Memorandum of Understanding	9	23	96	Memo
1811	85	CDCAC	Response to RDaniels letter	8	15	96	Letter
1812	85	CDCAC	Additional response to 6/23/96 JStengle letter	8	8	96	Letter
1801	85	CDCAC	Response to JStengle 6/23/96 letter	7	25	96	Letter
1650	85	CDCAC	Memorandum of Understanding	7	19	96	MOU
1902	85	CDCAC	July 18, 1996 CDCAC Meeting Notice	7	18	96	Notice
1903	85	CDCAC	Alternative Tech Handouts from 7/18/96 meeting	7	18	96	Handouts
1901	85	CDCAC	Transmittal of requested material	7	15	96	Memo
2111	85	CDCAC	Effectiveness of DEQ Staff	7	15	96	Letter
1900	85	CDCAC	Congrats to KJones for re-election as Chair	7	5	96	Letter
1597	85	CDCAC	Letter from JStengle	6	23	96	Letter
1489	85	CDCAC	May 21,96 meeting notice and agenda	4	19	96	Letter
1490	85	CDCAC	May 21,96 meeting notice and agenda	4	19	96	Letter
1491	85	CDCAC	May 21,96 meeting notice and agenda	4	19	96	Letter
1492	85	CDCAC	May 21,96 meeting notice and agenda	4	19	96	Letter
1493	85	CDCAC	May 21,96 meeting notice and agenda	4	19	96	Letter
1494	85	CDCAC	May 21,96 meeting notice and agenda	4	19	96	Letter
1495	85	CDCAC	May 21,96 meeting notice and agenda	4	19	96	Letter
1496	85	CDCAC	May 21,96 meeting notice and agenda	4	19	96	Letter

1406	85	CDCAC	CDCAC Roster	3	22	96	Roster
1072	85	CDCAC	FY96 Application for FEMA Funding	2	9	96	Application
969	85	CDCAC	Intent of EQC Meeting	12	21	95	Letter
970	85	CDCAC	EQC Meeting Agenda	12	18	95	Lttr/Fax
1041	85	CDCAC	Future Oregon CAC Meetings	12	8	95	Letter
1071	85	CDCAC	Overheads: Overview of Chem Demil Program	11	29	95	Overview
1215	85	CDCAC	Meeting Notice - 11-29-95	11	10	95	Notice
971	85	CDCAC	Ag Impact Assessment Workshop	11	1	95	Letter
972	85	CDCAC	Meeting Notice	9	20	95	Notice
973	85	CDCAC	Storage Issues	8	9	95	Memo
974	85	CDCAC	Meeting Notice CDCAC Good Shepard Commnty	4	5	95	Notice
975	85	CDCAC	Meeting Notice CDCAC State Office Building	1	23	95	Notice
976	85	CDCAC	Meeting Notice CDCAC Yellowhawk Center	12	14	94	Notice
977	85	CDCAC	Meeting Notice CDCAC Good Shepard Commnty	10	12	94	Notice
978	85	CDCAC	Meeting Notice CDCAC Good Shepard Commnty	6	29	94	Notice
979	85	CDCAC	Asses. Final Alt. Tech. Report	4	12	94	Letter
980	85	CDCAC	CDCAC Appointed By BRoberts Under Fed Law	8	6	93	Cntrct
981	85	CDCAC	Invite to 1st CSEPP Meeting	8	22	90	Letter
982	85	CDCAC	Automation Workshops	8	22	90	Memo
983	85	CDCAC	Invite to Hearing on Dispostn Chem Agent	3	16	87	Letter
2102	86	FEMA/CDCAC Agrmnt	Cooperative Agreement with LMarsh Sig.	9	26	96	Agreement
1814	86	FEMA/CDCAC Agrmnt	Req.to extend coop agreemnt performance period	9	19	96	Letter
1813	86	FEMA/CDCAC Agrmnt	Transcription Invoice for CDCAC	7	2	96	Letter
1579	86	FEMA/CDCAC Agrmnt	EMS-96-CA-0037 FY 1996 Cooperative Agreement	5	6	96	Letter
1906	86	FEMA/CDCAC Agrmnt	Cooperative Agreement - FY94	3	29	96	Letter
1074	86	FEMA/CDCAC Agrmnt	Cooperative Agreement Close-out FY94	2	2	96	Letter
1075	86	FEMA/CDCAC Agrmnt	Itemized Expenses Incurred by CDCAC	2	2	96	Report
1176	86	FEMA/CDCAC Agrmnt	Financial Statement Ending 12/31/95	1	20	96	Reports
1907	86	FEMA/CDCAC Agrmnt	Funding for CDCAC	4	10	95	Letter
1254	86	FEMA/CDCAC Agrmnt	Financial Assistance Application	6	3	94	Application
1253	86	FEMA/CDCAC Agrmnt	Invitation to apply for financial assistance	5	13	94	Letter
1073	86	FEMA/CDCAC Agrmnt	Memorandum of Understanding - CDCAC/DEQ	2	16	94	Memo
1917	87	Combustion Risk	JACADS Risk Related Issues	10	2	96	Memo
2085	87	Combustion Risk	Ag Impact Assess Plan for Baseline Study Tooel	10	2	96	Report
1916	87	Combustion Risk	Transmittal of Draft Pre-Trial Burn R.A.-UMCDF	9	24	96	Memo
2086	87	Combustion Risk	Greenlaw Preliminary Risk Analysis Incin Prog	9	0	96	Report
1767	87	Combustion Risk	Information from RTI	8	28	96	Report
1603	87	Combustion Risk	Breastmilk Pathway of Concern Pre-Trial Burn R	8	7	96	Memo
2087	87	Combustion Risk	RA Protocol Chem Agent Disposal Facility	7	30	96	Letter
1703	87	Combustion Risk	Met info from Pat Hanrahan	7	11	96	EMail
1915	87	Combustion Risk	Transmittal of "US Chem Destr.Program:Views...	7	3	96	Memo
1604	87	Combustion Risk	Comparisons between quan.R.A. & Comp.R.A.	6	26	96	Letter
1605	87	Combustion Risk	Public Participation Record for Screening R.A.	6	20	96	Report
1598	87	Combustion Risk	JACADS Risk Assessment	5	28	96	Report
1914	87	Combustion Risk	Agri. Risk Assessmnt: material & transcript	5	15	96	Report
1913	87	Combustion Risk	Risk Assessment questions - Kalama Chemical in	5	3	96	Memo

1498	87	Cumbustion Risk	Utah DEQ Risk Assessment Overhead	4	15	96	Overheads
1580	87	Combustion Risk	Notice of Intent to Sue (TOCDF)	4	8	96	
1912	87	Combustion Risk	Various comments on Utah Risk Assessment	4	1	96	Comments
2269	87	Combustion Risk	Draft Pre-Trial RA Proposed at Umatilla Chem.	4	0	96	Report
2268	87	Combustion Risk	Draft Pre-Trial RA Proposed at Umatilla Chem.	4	0	96	Report
1651	87	Combustion Risk	Suppl.Risk Assess.Guidance for Superfund-Draft	3	27	96	Report
1497	87	Combustion Risk	Comparative Risk Assessment Option	3	0	96	Report
1911	87	Combustion Risk	Risk Assessment protocol for JACADS	2	28	96	Report
1550	87	Combustion Risk	Review of the ANCDF SRA	2	26	96	Report
827	87	Combustion Risk	Review Draft Pre-Risk Assessment	2	22	96	Report
1179	87	Combustion Risk	Re: Letter dated 11/22/95	2	12	96	Letter
1178	87	Combustion Risk	Parameters Concerning UMAD Pre-trial R.A.	2	9	96	Memo
1412	87	Combustion Risk	Tooele Chem Demil Screening Risk Assessment	2	0	96	Report
1085	87	Combustion Risk	Various ltrs,desc.,agendas re crop assessmnt	1	23	96	Letters
1086	87	Combustion Risk	Air-to-leaf Transfer...	1	23	96	Memo
1084	87	Combustion Risk	Notes on "Dec.95 Implementation Guidance"	1	18	96	Notes
1083	87	Combustion Risk	Insertion of Dioxin & Bromoform	1	15	96	Spreadsheet
1081	87	Combustion Risk	Ervosivity and Evapotranspiration Doc.	1	14	96	Memo
1082	87	Combustion Risk	Surface water flows	1	14	96	Memo
1255	87	Combustion Risk	Clarification of Erosivity	1	12	96	FAX
1079	87	Combustion Risk	Watersheds	1	11	96	EMail
1080	87	Combustion Risk	WTI Risk Assessment Peer Review Meeting	1	11	96	Notes
1078	87	Combustion Risk	Response to Risk Assessment Wkplan comments	1	9	96	Letter
1411	87	Combustion Risk	Crop Health Risk Assessment	12	12	95	Report
984	87	Combustion Risk	WTI Workshop	11	30	95	FederlReg
1413	87	Combustion Risk	Final Screening Risk Assessment - Anniston,AL	11	30	95	Report
1414	87	Combustion Risk	Final Screening Risk Assessment - Anniston,AL	11	30	95	Report
1415	87	Combustion Risk	Final Screening Risk Assessment - Anniston,AL	11	30	95	Report
1416	87	Combustion Risk	Final Screening Risk Assessment - Anniston,AL	11	30	95	Report
1417	87	Combustion Risk	Final Screening Risk Assessment - Anniston,AL	11	30	95	Report
1177	87	Combustion Risk	Comment on Pre-Trial Burn Risk Work Plan	11	27	95	Letter
1076	87	Combustion Risk	Comments on Risk Assessment Workplan	11	22	95	Comments
986	87	Combustion Risk	Meeting Notice Open Forum	11	2	95	Notice
2088	87	Combustion Risk	Request for Columbia Basin GIS Data	11	1	95	Letter
1606	87	Combustion Risk	Risk Ass. for Waste Tech Ind. HazWaste Facilit	11	0	95	Report
985	87	Combustion Risk	JACADS meeting W/ Public	10	30	95	Memo
1154	87	Combustion Risk	UMDA Meteorological Data Comparison	5	3	95	Letter
1910	87	Combustion Risk	Study to determine if off-site meteorological.	4	3	95	Report
1047	87	Combustion Risk	Revised Meteorological Monitoring Plan	2	28	95	Lttr/Rpt
1840	87	Combustion Risk	Health Risk Assessment Protocol for ANCDF	1	19	95	Report
872	87	Combustion Risk	Determination of Acute Toxicity Exp Lvls	1	0	95	Report
1909	87	Combustion Risk	Suppl.guidance for Ecologic Risk Assessments	10	14	94	Report
2089	87	Combustion Risk	Representative Hanford Radiation Dose Estimate	5	21	94	Pamphlet
2306	87	Combustion Risk	Exposure Assessment Guidance for RCRA HW	4	0	94	Report
1908	87	Combustion Risk	Guidance for upset conditions, Appendix E-1	8	0	90	Report
2323	87	Combustion Risk	Methodology for Assessing Health Risks	1	0	90	Report

	88	Various Dioxin Info	**Note:** Indvdl Docs Do Not have Admin #				
1002	90	Old Part B	Furnace Scope of Work	11	5	91	Graph
1003	90	Old Part B	Burnout and Removal of Deactivatn Furnance	9	30	91	Memo
1004	90	Old Part B	Progress Update Interim Remediatn Actn	7	26	91	Memo
987	90	Old Part B	RCRA Application	8	0	90	Applictn
988	90	Old Part B	RCRA Application	8	0	90	Applictn
989	90	Old Part B	RCRA Application	8	0	90	Applictn
990	90	Old Part B	RCRA Application	8	0	90	Applictn
991	90	Old Part B	RCRA Application	8	0	90	Applictn
992	90	Old Part B	RCRA Application	8	0	90	Applictn
993	90	Old Part B	RCRA Application	8	0	90	Applictn
994	90	Old Part B	RCRA Application	8	0	90	Applictn
995	90	Old Part B	RCRA Application	8	0	90	Applictn
996	90	Old Part B	RCRA Application	8	0	90	Applictn
997	90	Old Part B	RCRA Application	8	0	90	Applictn
998	90	Old Part B	RCRA Application	8	0	90	Applictn
999	90	Old Part B	RCRA Application	8	0	90	Applictn
1000	90	Old Part B	RCRA Application	8	0	90	Applictn
1001	90	Old Part B	RCRA Application	8	0	90	Applictn
1005	90	Old Part B	Response to Phone conversation	7	26	90	Fax
1006	90	Old Part B	Deactivatn Furnace, Closure Plan	11	15	89	Letter
1007	90	Old Part B	Installation Spill Contingency Plan	5	18	89	Rvsd Pages
1008	90	Old Part B	OB/OD Brning, Brn Trays, Land	2	22	89	Letter
1009	90	Old Part B	CSD, Subseqnt Cmmts to Dec.8 88	12	14	88	Letter
1010	90	Old Part B	RCRA Part B App For Tooele CSDS Comments	12	8	88	Letter
1017	90	Old Part B	RCRA Support Documents	9	0	87	Report
1011	90	Old Part B	CSDP	7	24	87	Table
1018	90	Old Part B	RCRA HW Permit Application	5	29	87	Report
1661	90	Old Part B	RCRA Hazardous Waste Permit Application	5	0	87	Report
1662	90	Old Part B	RCRA Hazardous Waste Permit Application	5	0	87	Report
1663	90	Old Part B	RCRA Hazardous Waste Permit Application	5	0	87	Report
1664	90	Old Part B	RCRA Hazardous Waste Permit Application	5	0	87	Report
1665	90	Old Part B	RCRA Hazardous Waste Permit Application	5	0	87	Report
1012	90	Old Part B	RCRA Part B Permit Review	11	6	86	Memo
1013	90	Old Part B	Review of Documents on Chemical Agents	11	6	86	Memo
1014	90	Old Part B	Supplement to RCRA Part B App	10	20	86	Letter
1019	90	Old Part B	RCRA HW Permit Application	9	15	86	Report
1020	90	Old Part B	RCRA HW Permit Application	9	15	86	Report
1021	90	Old Part B	RCRA HW Permit Application	9	15	86	Report
1022	90	Old Part B	RCRA HW Permit Application	9	15	86	Report
1656	90	Old Part B	RCRA Hazardous Waste Permit Application	9	0	86	Report
1657	90	Old Part B	RCRA Hazardous Waste Permit Application	9	0	86	Report
1015	90	Old Part B	Inspection, Closure, Contingency Plan	0	0	0	Memo
1016	90	Old Part B	Part B App. Nerve Agent Incinerator	0	0	0	Letter
2257	92	EQC Documents	Tape 1, Sides 1 & 4,EQC in Pendleton	11	22	96	Cassette
2258	92	EQC Documents	Tape 2, Side 6,2, and 5, EQC in Pendleton	11	22	96	Cassette

2259	92	EQC Documents	Tape 3,Side 3, EQC in Pendleton	11	22	96	Cassette
2044	92	EQC Documents	DEQ Directors Recommendations to EQC on BAT	11	22	96	Fax
2045	92	EQC Documents	Proposed Prmt Conditions from Commission Mtgs	11	22	96	Attch B
2046	92	EQC Documents	Dept. Recommended Permit Cndtns from Commsn Mt	11	22	96	Cndtn
2047	92	EQC Documents	Qstns about proposed UMCDF	11	21	96	Memo
2050	92	EQC Documents	Transmittal of Public Comments	11	18	96	Memo
2048	92	EQC Documents	Concerns regarding Emergency Preparedness Issu	11	15	96	Letter
2146	92	EQC Documents	Tape 1, Side 1 and Side 3	11	15	96	Cassette
2147	92	EQC Documents	Tape 2, Side 2 and Side 4	11	15	96	Cassette
2148	92	EQC Documents	Tape 3,	11	15	96	Cassette
2049	92	EQC Documents	Response to Umatilla Documents for 11/15/96	11	14	96	Memo
2051	92	EQC Documents	EQC Meeting 11/14-15/96 in Portland	11	14	96	Agenda
2149	92	EQC Documents	Tape 3	11	14	96	Cassette
2150	92	EQC Documents	Tape 2, Side 2 and Side 4	11	14	96	Cassette
2151	92	EQC Documents	Tape 1, Side 1 and Side 3	11	14	96	Cassette
2055	92	EQC Documents	Transmittal of Umatilla Doc in Prep for 11/15/	11	6	96	Memo
2056	92	EQC Documents	Best Available Technology Finding	11	5	96	Memo
2057	92	EQC Documents	Notice to Persons Interested in Proposed Incin	11	0	96	Notice
2072	92	EQC Documents	Copy of OSU Dioxin Paper	10	31	96	Memo
2058	92	EQC Documents	Rpt to Questions on Dioxin Formation at UMCDF	10	29	96	Report
2062	92	EQC Documents	EQC Work Session 9-27-96	10	27	96	Minutes
2053	92	EQC Documents	EQC Meeting 11/22/96 in Pendleton	10	24	96	Agenda
2052	92	EQC Documents	EQC Meeting 11/22/96 in Pendleton	10	23	96	Agenda
2054	92	EQC Documents	EQC Meeting 11/14-15/96 in Portland	10	23	96	Agenda
2059	92	EQC Documents	EQC Minutes 10/11/96 Regular Meeting	10	11	96	Minutes
2060	92	EQC Documents	Handout for 10-11-96 EQC Meeting	10	11	96	Hndout
2157	92	EQC Documents	EQC Meeting, Umatilla Portion	10	11	96	Cassette
1825	92	EQC Documents	EQC Meeting Agenda for 10/10-11/1996	10	10	96	Agenda
2061	92	EQC Documents	EQC Work Session 10-10-96	10	10	96	Minutes
2137	92	EQC Documents	Side 6 and Side 8	9	27	96	Cassette
2138	92	EQC Documents	Side 5 and Side 7	9	27	96	Cassette
1822	92	EQC Documents	EQC Meeting Agenda for 9/27/96	9	27	96	Agenda
1823	92	EQC Documents	Discussion of proposed permit condition-UMCDF	9	27	96	Report
1824	92	EQC Documents	Discussion of ORS466.055 Findings	9	27	96	Report
2063	92	EQC Documents	Discussion of ORS 466.055b Findings	9	27	96	Memo
2071	92	EQC Documents	Executive Summary from the NRC report on AltTe	9	25	96	Memo
1821	92	EQC Documents	Response to HLorenzen's 9/5/96 letter	9	17	96	Letter
2064	92	EQC Documents	EQC 9-27-96 Meeting in Portland	9	13	96	Agenda
2070	92	EQC Documents	November EQC Meeting	9	13	96	Memo
1820	92	EQC Documents	EQC Worksession 9/27/96 list of goals	9	12	96	Memo
1775	92	EQC Documents	Leak incindent at Tooele, Utah	9	10	96	Report
1774	92	EQC Documents	Public survey and public info activities	8	31	96	Memo
1769	92	EQC Documents	Agenda Item H, EQC Meeting 8/23/96 BAT	8	28	96	Letter
1768	92	EQC Documents	UMCDF OEM Presentation to EQC	8	27	96	Letter
1819	92	EQC Documents	EQC Meeting notes from 8/22/96	8	27	96	Notes
2139	92	EQC Documents	Tape 1, EQC Meeting	8	23	96	Cassette

2140	92	EQC Documents	Tape 2, EQC Meeting	8	23	96	Cassette
2141	92	EQC Documents	Tape 3, EQC Meeting	8	23	96	Cassette
1706	92	EQC Documents	EQC Meeting Agenda for 8/22-23/96	8	22	96	Notice
1930	92	EQC Documents	Written Testimony from KJones 8/22/96	8	22	96	Reports
1931	92	EQC Documents	Letter from Rep.Chuck Norris	8	22	96	Letter
2144	92	EQC Documents	Tape 1, EQC Meeting, Afternoon Session	8	22	96	Cassette
2145	92	EQC Documents	Tape 2, EQC Meeting, Afternoon Session	8	22	96	Cassette
2142	92	EQC Documents	Tape 1, EQC Meeting, Evening Session	8	22	96	Cassette
2143	92	EQC Documents	Tape 2, EQC Meeting, Evening Session	8	22	96	Cassette
1929	92	EQC Documents	DWysocki unable to attend August EQC meeting	8	13	96	Letter
1772	92	EQC Documents	Request for attendance to 8/22/96 EQC Mtg	8	8	96	Letter
1928	92	EQC Documents	UAD items for 8/22-23/96 EQC Meeting	8	8	96	Memo
1704	92	EQC Documents	Transmittal of additional info on UMCDF	8	7	96	Memo
1705	92	EQC Documents	Transmittal of info for EQC Meeting 8/22-23/96	8	7	96	Fax
1817	92	EQC Documents	EQC 7/11/96 worksession R.A.response issues	7	11	96	Report
1818	92	EQC Documents	Chemical Demil Program presentation for 7/11/9	7	11	96	Report
1927	92	EQC Documents	Transmittal of "US Chem Destr.Program:Views...	7	3	96	Memo
1602	92	EQC Documents	Transmittal of Documents to EQC	7	2	96	Memo
1601	92	EQC Documents	Invitation to submit Alt.Tech videos	7	2	96	Letter
1600	92	EQC Documents	Invitation to submit Alt.Tech videos	7	2	96	Letter
1599	92	EQC Documents	Invitation to submit Alt.Tech videos	7	2	96	Letter
1815	92	EQC Documents	Invitation to submit Alt.Tech videos	7	2	96	Letter
1626	92	EQC Documents	EQC Meeting Agenda for 6/11-12/96	6	27	96	Agenda
1652	92	EQC Documents	Interagency Agreement - DEQ & OSU	6	25	96	Agreemnt
1625	92	EQC Documents	Response to James Quigley 5/30/96 letter	6	24	96	Letter
1551	92	EQC Documents	Ltr to JHaley w/MHarrison Testimony to EQC	5	31	96	Letter
1552	92	EQC Documents	Ltr to JGorrell requesting additional info	5	31	96	Letter
1553	92	EQC Documents	May 17 Umatilla Discussion list of speakers	5	17	96	Memo
1926	92	EQC Documents	Karyn Jones' Written Testimony for 5/17/96 EQC	5	17	96	Reports
2065	92	EQC Documents	Status of Emergency Response	5	17	96	Prsntation
2066	92	EQC Documents	Material Submitted by Karyn Jones	5	17	96	Report
2067	92	EQC Documents	Comments of Destruction of Chem Weapons at UAD	5	17	96	Cmmnts
1513	92	EQC Documents	EQC Worksession Agenda 5/16/96	5	16	96	Agenda
1583	92	EQC Documents	EQC Meeting Agenda for 5/16-17/96	5	16	96	Agenda
1584	92	EQC Documents	Air Quality Permit Overview for 5/16/96 EQC	5	16	96	Overheads
1925	92	EQC Documents	EQC Worksession air presentation 5/16/96	5	16	96	Overheads
2135	92	EQC Documents	EQC Work Session Potential Alt. to Incin	5	16	96	Video
2136	92	EQC Documents	EQC Work Session Potential Alt. to Incin	5	16	96	Video
2152	92	EQC Documents	EQC Work Session, Tape 1	5	16	96	Cassette
2153	92	EQC Documents	EQC Work Session, Tape 2	5	16	96	Cassette
2154	92	EQC Documents	EQC Work Session, Tape 3	5	16	96	Cassette
2155	92	EQC Documents	EQC Work Session, Tape 4	5	16	96	Cassette
2156	92	EQC Documents	EQC Work Session, Tape 5	5	16	96	Cassette
2068	92	EQC Documents	Umatilla Chemical Weapons Destruction Permits	5	7	96	Letter
1924	92	EQC Documents	Transmittal of Alternative Technologies info	5	3	96	Memo
1264	92	EQC Documents	Handout to EQC from Brett McKnight, DEQ	5	0	96	Binder

2069	92	EQC Documents	Delay Granting of the Army's Permit	4	30	96	Letter
1919	92	EQC Documents	Minutes for 4/12/96 EQC Meeting	4	22	96	Minutes
1512	92	EQC Documents	Letter to Mick Harrison	4	19	96	Letter
1582	92	EQC Documents	Response to OEC ltr dated 4/9/96 by JCharles	4	18	96	Memo
1920	92	EQC Documents	Emergency Update for 5/17/96 EQC Meeting	4	18	96	Letter
1921	92	EQC Documents	Emergency Update for 5/17/96 EQC Meeting	4	18	96	Letter
1922	92	EQC Documents	Emergency Update for 5/17/96 EQC Meeting	4	18	96	Letter
1923	92	EQC Documents	Participation in Alts to Incin. discussion	4	18	96	Letter
1502	92	EQC Documents	HW Permit Presentation - Overheads	4	12	96	Overheads
1501	92	EQC Documents	Confirmation of Attendance to May 16 mtg	4	10	96	Letter
1500	92	EQC Documents	Letter from John Charles re: EQC Decisions	4	9	96	Letter
1918	92	EQC Documents	Umatilla Chemical Weapons Incinerators	3	15	96	Memo
1581	92	EQC Documents	Minutes of the 250th Meeting	2	23	96	Minutes
1216	92	EQC Documents	Presentation to the EQC	2	9	96	Letter
1217	92	EQC Documents	Presentation to the EQC	2	6	96	Letter
1042	92	EQC Documents	Provide Comments; Video	12	26	95	Letter
1032	92	EQC Documents	Adoption of Rules Chapter 340	4	25	86	Memo
2114	94	Meeting Notes	Natl Chem Agent Demil Wrkgrp Mtg	11	14	96	Memo
2112	94	Meeting Notes	Next Scheduled Teleconference 10/17/96	10	9	96	Fax
1937	94	Meeting Notes	Papers from Env.Forum II-Salt Lake,UT 10/3/96	10	3	96	Papers
1936	94	Meeting Notes	Agenda-Workgroup Teleconference 10/7/96	9	24	96	Fax
1935	94	Meeting Notes	Exec summary of Env.Forum Denver,CO 7/10/96	9	23	96	Transcripts
2113	94	Meeting Notes	Chem Agent Demil Wrkgrp Conference Call Summar	8	13	96	Summary
1837	94	Meeting Notes	Chem Demil Forum - Denver 7/10/96	7	10	96	Notes
1836	94	Meeting Notes	Chem.Demil.Wkgrp - Conf.Call Summary - 6/11/96	6	11	96	Summary
1554	94	Meeting Notes	Chem Demil Conf. Call agenda for 6/11/96	6	5	96	Agenda
1934	94	Meeting Notes	Agenda-munitions rule conf call/mtg 5/29/96	5	20	96	Agenda
1503	94	Meeting Notes	Dioxin and Health Truth or Consequences	4	13	96	Flyer
1933	94	Meeting Notes	Dioxin Conference - 4/13/96	4	13	96	Papers
1504	94	Meeting Notes	Chem Demil Workgroup Conference Call	4	8	96	Memo
1226	94	Meeting Notes	Teleconference w/Army re:Various Issues	3	6	96	Agenda
1225	94	Meeting Notes	Notice for March 8,96 Teleconference	3	4	96	Notice
1224	94	Meeting Notes	Sequester Risk Assessment Mtg, Feb 27-29,96	2	27	96	Agenda
1223	94	Meeting Notes	Summary Feb 13,96 Teleconference	2	21	96	Summary
1190	94	Meeting Notes	Perimeter Monitoring Conference Call	2	15	96	Agenda
1222	94	Meeting Notes	Agenda Feb 15,96 Teleconference	2	15	96	Agenda
1555	94	Meeting Notes	Chem Demil 2/13/96 Conf call summary	2	13	96	Notes
1089	94	Meeting Notes	Umatilla status Teleconference	2	8	96	Agenda
2318	94	Meeting Notes	12/12/95 CAD Conference Call Summary	1	24	96	Memo
1088	94	Meeting Notes	Army Quarterly Meeting	12	13	95	Agenda
1272	94	Meeting Notes	EQC Meeting at Headquarters	12	13	95	Agenda
1221	94	Meeting Notes	Summary Dec 12,95 Teleconference	12	12	95	Summary
1220	94	Meeting Notes	Notes Nov 7,95 Pentagon Mtg	11	21	95	Summary
1219	94	Meeting Notes	Summary Aug 15-16,95 Quarterly Mtg Army/DEQ	11	15	95	Summary
1218	94	Meeting Notes	Summary Oct 25,95 Teleconference	11	13	95	Letter
1273	94	Meeting Notes	Teleconferences, Risk Assess.	11	8	95	Agendas

1407	94	Meeting Notes	Minutes from CTUIR meeting Nov.1,1995	11	1	95	Minutes
1274	94	Meeting Notes	Meeting Notes	10	25	95	Memo
2281	94	Meeting Notes	Briefing Book	10	25	95	Binder
1275	94	Meeting Notes	Witness Testimony Open Statmnt	10	12	95	Statmnt
1181	94	Meeting Notes	Agenda - DEQ/Army Quarterly Mtg 8/15-16/95	8	15	95	Agenda
1690	94	Meeting Notes	Meeting with DOH-5/26/95	5	26	95	Notes
1276	94	Meeting Notes	DEQ/Army Quarterly Meeting Minutes 5/24/95	5	24	95	Minutes
1277	94	Meeting Notes	Conference Call, ANCDF Permit App	4	21	95	Summary
1408	94	Meeting Notes	Comments on Draft Meeting Notes of 2/28/95	4	11	95	Notes
1087	94	Meeting Notes	Meeting Minutes - CSEPP/DEQ	3	28	95	Minutes
1932	94	Meeting Notes	Minutes-DEQ/Emerg.Management Meeting 3/28/95	3	28	95	Minutes
1180	94	Meeting Notes	Quarterly Mtg with ARmy/EPA/DEQ 3/21-22/95	3	22	95	Minutes
1278	94	Meeting Notes	Meteorological Data	3	21	95	Hndout
	94	Meeting Notes	Meeting Notice	1	23	95	Notice
	94	Meeting Notes	Meeting Notice	12	14	94	Notice
1279	94	Meeting Notes	Open House-Meeting Notice	11	16	94	Notice
1280	94	Meeting Notes	UMCDF Air Permit Application	11	2	94	Notes
1152	94	Meeting Notes	Quarterly Mtg Notes/Aug2-3,1994/Final	10	20	94	Notes
1151	94	Meeting Notes	EPA-US ARMY Meeting in DC	10	18	94	List/Nts
	94	Meeting Notes	CDCAC Meeting Notice	10	12	94	Notice
1150	94	Meeting Notes	Quarterly Mtg Notes/Aug2-3,1994/Draft	9	23	94	Notes
1149	94	Meeting Notes	ANAD Chem Demil Meeting	8	17	94	List/Nts
1148	94	Meeting Notes	Risk Assessment Roster	8	16	94	List
1147	94	Meeting Notes	Review Comments on ANAD Chem Demil Draft R.A.	8	5	94	Notes
1146	94	Meeting Notes	USACMDA Chem Demil Mtg Notice	7	26	94	Notice
1144	94	Meeting Notes	Chem Demil Mtg Summary Draft - 4/12-13/94	7	18	94	Notes
1145	94	Meeting Notes	Risk Assessmnt Mtg Summary Draft - 6/21-23/94	7	18	94	Notes
	94	Meeting Notes	CDCAC Meeting Notice	6	29	94	Notice
1143	94	Meeting Notes	CDCAC Meeting Notice	6	1	94	Notice
1142	94	Meeting Notes	CDCAC Meeting Notice	5	17	94	Notice
	94	Meeting Notes	Hearing on Alternative Technologies	5	3	94	Memo
1141	94	Meeting Notes	UMDA Denver Demil Meeting	4	12	94	Handouts
2115	94	Meeting Notes	Public Information Materials for CSDP Requeste	9	30	93	Letter
1140	94	Meeting Notes	Alternative Technologies Forum Draft Agenda	6	30	93	Agenda
1139	94	Meeting Notes	Final Meeting Notes from 12/9-11/92 Meeting	4	13	93	Minutes
1138	94	Meeting Notes	Draft Meeting Notes from 12/9-11/92 Meeting	1	15	93	Minutes
1137	94	Meeting Notes	Chem Demil Conference Call 10/21/92	10	21	92	Attachments
1136	94	Meeting Notes	USACMDA & Nerve Agent Wrkgrp list	9	29	92	List
1135	94	Meeting Notes	Agenda Chem Demil Conference Call- 10/21/92	9	24	92	Agenda
1134	94	Meeting Notes	Tech Orientation Wrkshp Attendance Roster	9	5	90	List
1133	94	Meeting Notes	Notes from Cathy Massimino 6/8/90	6	8	90	Notes
1132	94	Meeting Notes	Agenda-Intergovern.consultation & coordination	4	10	90	Agenda
1131	94	Meeting Notes	Umatilla Sign in Sheet 10/18-19/89	10	18	89	List
1130	94	Meeting Notes	ICCB Meeting - 8/17/87	8	18	89	Notes
1129	94	Meeting Notes	IAG Meeting 6/6/89 Portland - Roster	6	6	89	List
1127	94	Meeting Notes	Agenda - for IAG meeting 5/18/89	5	18	89	Notes

1128	94	Meeting Notes	DEQ/EPA/Army IAG Meeting Roster - 5/18/89	5	18	89	Agenda
1126	94	Meeting Notes	RCRA Corrective Action Order Wkshp - 2/22-23/8	2	22	89	Agenda
1125	94	Meeting Notes	Proposed schedule site specific NEPA Documents	1	3	89	Schedule
1123	94	Meeting Notes	Tooele Incinerator Project meeting - 11/28/88	11	28	88	Notes
1122	94	Meeting Notes	Results of Steering Committee Meeting-10/26/88	11	16	88	Memo
1124	94	Meeting Notes	Intergov Consultation & Coordination Board	11	15	88	List
1120	94	Meeting Notes	Emerg Response Steering Committee Mtg Attendee	11	3	88	List
1121	94	Meeting Notes	Review Team Members Roster	11	3	88	List
1117	94	Meeting Notes	Chem Demil Meeting Minutes 2/88	5	5	88	Minutes
1119	94	Meeting Notes	Minutes from meeting in Pasadena 11/12-13/87	1	21	88	Minutes
1116	94	Meeting Notes	On-Site Inspectors for monitoring compliance	12	15	87	Memo
1118	94	Meeting Notes	Notes from UAD Conference Call - 12/87	12	0	87	Notes
1115	94	Meeting Notes	24hr On-Site Inspection/Computer Link-Up	11	18	87	Letter
1114	94	Meeting Notes	Highlites from 11/12-13/87 RCRA/Army Mtg	11	0	87	Summary
1113	94	Meeting Notes	Meeting w/Army 11/12-13-97	10	16	87	Memo
1111	94	Meeting Notes	Interim report based on plant visit/RCRA Revie	9	25	87	Report
1110	94	Meeting Notes	Notice re: Mtg.on Long-Term Low-Dose Exposure	9	3	87	FedReg
1112	94	Meeting Notes	Briefing outlines submitted to Army 9/1/87	9	2	87	Letter
1109	94	Meeting Notes	UAD RCRA facility investigation-draft workplan	5	19	87	Letter
1108	94	Meeting Notes	Minutes from 3/87 meetings with Army	5	6	87	Minutes
1107	94	Meeting Notes	Attendees at Mtg W/EPA SWMU at Umatilla 5/5/87	5	5	87	List
1106	94	Meeting Notes	Draft Minutes of 3/87 meetings in Aberdeen	4	14	87	Memo
1104	94	Meeting Notes	Meeting notes from 5/25/87 - Chem Demil wrkgrp	3	25	87	Notes
1105	94	Meeting Notes	Attendees at 3/25/97 EPA State Meeting	3	25	87	List
1103	94	Meeting Notes	Conference call agenda for 2/5/87	2	5	87	Memo
1102	94	Meeting Notes	UAD Conference Call Notes	0	0	87	Notes
1101	94	Meeting Notes	Agenda,Chem Demil RCRA App. Mtg 9/25-26/86	9	9	86	Memo
1100	94	Meeting Notes	Attendees for 8/29/86 Chem Demil Mtg	8	29	86	List
1099	94	Meeting Notes	Agenda,Chem Demil RCRA App Mtg 8/29/86	8	18	86	Memo
1098	94	Meeting Notes	Notes from 5/13-14/86 DOA-EPA Mtg	7	17	86	Notes
1097	94	Meeting Notes	Schedule of conference calls - Chem Demil wkgr	7	11	86	Memo
1096	94	Meeting Notes	Installation Points of Contact for Chem Demil	5	29	86	Memo
1095	94	Meeting Notes	Report on 5/13-14/86 EPA/DA Meeting	5	13	86	Report
1094	94	Meeting Notes	National Meeting EPA/DOD Task Force 5/13-14/86	5	6	86	Memo
1091	94	Meeting Notes	Directions to Aberdeen Proving Grounds	0	0	0	Map
1092	94	Meeting Notes	Meeting Attendees Fed & State	0	0	0	List
1093	94	Meeting Notes	Notes	0	0	0	Notes
1499	95	Guidance Documents	Guidance for Total Organics	3	1	96	Report
1227	95	Guidance Documents	EPA Region 10-Suppl.Risk Assess.Superfund	2	0	96	Document
1230	95	Guidance Documents	Guidance for Total Organics - Final Draft Rpt	1	26	96	Report
2272	95	Guidance Documents	User's Guide for the Industrial Source Complex	7	19	95	Binder
	95	Guidance Documents	Pre-Proposed Munitions Rule	6	21	95	Lette
1557	95	Guidance Documents	Wkshp on Assessing Risks from...	3	22	95	Workbook
	95	Guidance Documents	Civil Admin. Enforcmnt Action	3	13	95	Action
1429	95	Guidance Documents	Draft Protocol-Anniston	2	6	95	Report
1292	95	Guidance Documents	Tooele Safety Issues	1	17	95	Report

1291	95	Guidance Documents	CMA/EPA BIF Wrkshop	1	0	95	Trnscrpt
	95	Guidance Documents	4068.Mgmt Standards for HW	11	14	94	Rule
1290	95	Guidance Documents	Meteorological Monitoring Plan	7	29	94	Report
	95	Guidance Documents	Alternative Technologies /Army	4	1	94	Flyer
1653	95	Guidance Documents	Addendum to Methodology for Assessing Health R	11	10	93	Report
	95	Guidance Documents	Federal Register/Proposed Rule	10	25	93	Fed Reg
	95	Guidance Documents	Federal Register/Proposed Rule	10	20	93	Fed Reg
1289	95	Guidance Documents	Public Opinion Survey	10	1	93	Report
	95	Guidance Documents	Highst Best Trtmnt Required	9	24	93	Rules
	95	Guidance Documents	Proposed Nerve Agent Inc Proc	10	6	92	Report
	95	Guidance Documents	Fed Fac Compliance Act	0	0	92	Regs.
	95	Guidance Documents	Chemical Weapons Disposal	11	10	91	Report
	95	Guidance Documents	HW Incinerator Proposed Contrl	3	1	90	Report
	95	Guidance Documents	HW Incinerator Proposed Contrl	3	1	90	Report
1288	95	Guidance Documents	Wkshp Review RCRA Trial Burn	5	9	89	Report
1287	95	Guidance Documents	PIC Control for HW Incinerator	4	1	89	Report
1286	95	Guidance Documents	HW Incineration Measurement	3	28	89	Report
1285	95	Guidance Documents	Trial Burn Observation Guide	3	1	89	Report
1284	95	Guidance Documents	Reviewing Trial Burn Reports	2	10	89	Report
1282	95	Guidance Documents	Permit Conditions & Trial Burn	1	1	89	Report
1283	95	Guidance Documents	HW Incinerator Inspection Man.	1	1	89	Report
1296	95	Guidance Documents	CO Control HW Incinerator	9	9	88	Report
1419	95	Guidance Documents	Emer Resp Prog Guidance/Final	11	30	87	Report
	95	Guidance Documents	M P F Heating Curve	10	1	87	Misc
1295	95	Guidance Documents	HW Incinerator Permits	7	1	83	Report
1281	95	Guidance Documents	Metals Partitioning	0	0	0	Report
1293	95	Guidance Documents	Safely Destroying Chem Weap	0	0	0	Brochure
1294	95	Guidance Documents	Permit Conditions & Trial Burn	0	0	0	Report
1307	96	Regulations	Permit Denial Appeals, DA sig.	9	12	95	EMail
1306	96	Regulations	Pre-Proposed Munitions Rule	6	21	95	Letter
1305	96	Regulations	Draft Military Munitions	5	25	95	Letter
1304	96	Regulations	Redraft of Mltry Mntns Rule	5	18	95	Letter
1303	96	Regulations	Utah Administrative Code	1	5	95	Report
1302	96	Regulations	Highest & Best Treatment	11	26	94	OAR
1301	96	Regulations	Chemical Destruction Program	0	0	93	Regs
842	96	Regulations	Fed Reg. Dspsl Chem Agents	3	3	92	Notice
1300	96	Regulations	House Bill No. 465	2	26	92	Bill
843	96	Regulations	Reopening of Public Comment Prd	2	26	92	Fed. Reg.
1299	96	Regulations	Federal Facility Compliance	1	3	92	Act
1297	96	Regulations	Amendmnt to Owners & Operators	4	24	90	Letter
1298	96	Regulations	Amedment to Owners & Operators	4	13	90	Letter
871	96	Regulations	Long- Term Exposure to GA, GB	12	22	87	Fed Reg
1839	96	Regulations	Federal Register re: RCRA BDAT	11	7	86	Federal Reg
877	96	Regulations	Intent to Prepare EIS	4	9	85	Fed Reg
1182	96	Regulations	Applicability of the NEPA to RCRA	5	22	79	Memo
	98	Various Vendor Info	**Note:** Indvdl Documents Do Not Have Admin #				

2094	99	Misc - Demil	Petitioners 1st set of Doc Prod Rqst to UDEQ	10	29	96	Letter
1939	99	Misc - Demil	Greenlaw Suit in Utah re: TOCDF	8	8	96	Findings
1938	99	Misc - Demil	Greenlaw Notice of Intent to Sue TOCDF	6	28	96	Notice
1627	99	Misc - Demil	Affidiavit of Steve Jones	6	3	96	Affidavit
1556	99	Misc - Demil	Greenlaw Suit in Utah	5	28	96	Report
1816	99	Misc - Demil	Greenlaw Utah Complaint	5	1	96	Complaint
2092	99	Misc - Demil	State & Tribal Forum on Risk-Based Decsn	10	16	95	Anncmnt
1183	99	Misc - Demil	Environment Arkansas!BBS	9	27	95	FileListing
1184	99	Misc - Demil	Survey of Opinions and Behaviors	9	5	95	Letter
1364	99	Misc - Demil	Hermiston Office Activities Report #2	8	8	95	Memo
	99	Misc - Demil	Umatilla Project Activites	8	8	95	Memo
1363	99	Misc - Demil	Citizens Advisory Meeting	8	2	95	Agenda
1361	99	Misc - Demil	Military ProcuremntSubcommittee Hearing 7/13/9	7	13	95	Report
1362	99	Misc - Demil	John Nunn, CDCAC	7	13	95	Testmny
1365	99	Misc - Demil	Pblc Ntce Johnston Atoll Chem.	6	28	95	Notice
1360	99	Misc - Demil	Proposed Rule Stage - #4068	11	14	94	FedReg
1366	99	Misc - Demil	Disp of Chem Agents & Munition	5	26	94	Present
1359	99	Misc - Demil	Hearing on Alt. Tech.	5	3	94	Memo
1358	99	Misc - Demil	Proposed Rule Stage - #3746	10	25	93	FedReg
1357	99	Misc - Demil	PartII Risk Mngmt for Accidental Release	10	20	93	FedReg
1356	99	Misc - Demil	DOD Authorization Act	2	2	93	Act
	99	Misc - Demil	CSDP Schedule	12	10	92	Schedule
2131	99	Misc - Demil	Proposed Umatilla Nerve Agent Incin Process	10	6	92	Process
19	99	Misc - Demil	Facility Management Plan	3	0	92	Plan
1355	99	Misc - Demil	House Bill No. 465	2	26	92	Bill
2130	99	Misc - Demil	Internatl Citizens Accord on Chem Weapns Disps	11	10	91	Mtg Notes
1354	99	Misc - Demil	Prgrss Updte Interm Remdtn Actn	7	23	91	Memo
1353	99	Misc - Demil	A/E Support in Doc. Prepartn	1	2	91	Memo
1344	99	Misc - Demil	GAO Report	10	3	90	Letter
1343	99	Misc - Demil	Automation Workshops	9	21	90	Letter
1342	99	Misc - Demil	DEQ Mts Army Env Branch Part B	8	24	90	Memo
1341	99	Misc - Demil	Visit to JACADs, Shkdwn Opertn	8	14	90	Report
1340	99	Misc - Demil	RGIs Changed, One RSM	6	29	90	Letter
	99	Misc - Demil	US & Soviet Agrmnt Chem Weapons	6	6	90	Letter
1339	99	Misc - Demil	DOD Draft Tstmny Stckple	4	3	90	Memo
1338	99	Misc - Demil	Programs schedules Revision 2	3	0	90	Scheduls
2322	99	Misc-Demil	Hazardous Waste Facility Permit Fee	11	2	89	Memo
1337	99	Misc - Demil	Proposed Decision to Deny Prmt	8	30	89	Letter
1336	99	Misc - Demil	Popping Furnace Admin Record	8	29	89	Chart
23	99	Misc - Demil	Popping Furnace Administrative Record	8	29	89	Chart
	99	Misc - Demil	Issuance of RCRA Permit Furnce	7	19	89	Letter
1335	99	Misc - Demil	CSDP Dsgn & Opertn	1	6	89	Letter
1334	99	Misc - Demil	Replcment Dir. RCRA Revisions	1	0	89	Rplcmnt
1333	99	Misc - Demil	Installation Restratn Program	8	2	88	Report
1332	99	Misc - Demil	UMDA Deactivation Furnace	3	14	88	Letter
1331	99	Misc - Demil	Joint Legsltve Committee	2	10	88	Tstmony

1330	99	Misc - Demil	Minimum Operating Temperatures	12	14	87	Memo
1329	99	Misc - Demil	Automatic waste Feed Monitring	11	10	87	Memo
1328	99	Misc - Demil	Issues of Concern to Reg. 4	10	28	87	Memo
1327	99	Misc - Demil	Summary of Responses, NOD CSD	10	13	87	Report
1326	99	Misc - Demil	Army Reports Nrve Agnt Toole	9	22	87	Memo
1325	99	Misc - Demil	App Review Comments HW Prmt	9	9	87	Notes
1324	99	Misc - Demil	Conference Call, ERT Assistce	4	23	87	Memo
1323	99	Misc - Demil	RCRA Faclty Invest. Constrnts	4	1	87	Letter
1322	99	Misc - Demil	Evaluation of Cntrl Lvls	3	20	87	Memo
1321	99	Misc - Demil	Review of Material on TAGA	1	6	87	Letter
1318	99	Misc - Demil	State of Indiana Part B Review	12	19	86	Report
1319	99	Misc - Demil	Lexington Bluegrass Army Depot	12	19	86	Report
1317	99	Misc - Demil	Request of Info. on Proposed Incin.	11	20	86	Letter
1313	99	Misc - Demil	Work Assign., Generic CAD Review, Fnl Delivrbl	11	6	86	Letter
1316	99	Misc - Demil	Nerve Agnt Demil Project	10	28	86	Memo
1315	99	Misc - Demil	Nrve Agnt Dispsl at Umatilla	9	24	86	Tstmny
1312	99	Misc - Demil	CSDS National Alternative	9	18	86	Chklst
1314	99	Misc - Demil	Information on Corrective Actn	9	4	86	Memo
1345	99	Misc - Demil	Inactive Burning Pad	8	5	86	Invntry
1346	99	Misc - Demil	Agent H Burial Pits	8	5	86	Invntry
1347	99	Misc - Demil	Missile Fuel Burning Pits	8	5	86	Invntry
1348	99	Misc - Demil	Decontaminated GB drum burial site	8	5	86	Invntry
1349	99	Misc - Demil	Demil & Decontmntn of VX Bomb	8	5	86	Invntry
1350	99	Misc - Demil	Laundry Settlng Tanks, HW Activities	8	5	86	Invntry
1351	99	Misc - Demil	Ammunition Surveillance Test Area	8	5	86	Invntry
1352	99	Misc - Demil	Opn Burning Detonation OB/OD Area	8	5	86	Invntry
1320	99	Misc - Demil	Facility Management Plan	7	31	86	Plan
1311	99	Misc - Demil	Prmt Issues Rltd to US Army	5	8	86	Memo
1308	99	Misc - Demil	Fig. Metal Parts Furnace	0	0	0	Figures
1309	99	Misc - Demil	Indicator Tubes for Detection of TNT	0	0	0	Report
1310	99	Misc - Demil	Regulated Activities UMAD	0	0	0	Notes
2093	99	Misc - Demil	BRAC Realignment and Closure Env Restoration	0	0	0	Brochure
2283	255	Alternative Tech.	Videotape footage of various alternatives	8	13	96	Letter
2284	255	Alternative Tech.	Demilitarization Alternative Technology	7	2	96	Letter
2282	255	Alternative Tech.	Agent 313 Technology by Commodore	6	21	96	Letter
2301	255	Alt Technology	M4 CEP Tour	0	0	0	Video
2302	255	Alt Technology	EcoLogic Toronto Update	0	0	0	Video
2303	255	Alt Technology	EcoLogic Chemical Demilitarization Update	0	0	0	Video
2300	270	News Articles	Still Nervous; Northwest Reports	7	14	96	Video
2285	275	Public Outreach	UAD Incin Facility Impact on Airshed Pollutant	1	3	95	Agenda
2304	287	RA & Met Station	Phase 1 Quantitative RA, for Umatilla Chem.	4	0	96	Report
2298	287	RA & Met Station	One year of On-Site Met Data	9	12	95	Letter
2293	287	RA & Met Station	Draft ISCSTDFT Model	6	5	95	Drctns
2292	287	RA & Met Station	Meteorological Data Comparison	5	3	95	Letter
2291	287	RA & Met Station	Comparison of Met Data from UMDA & US Generatn	4	10	95	Report
2296	287	RA & Met Station	Revised Met Monitoring Plan for Umatilla Depot	2	23	95	Report

2287	287	RA & Met Station	Met Stations System Audit	2	1	95	Letter
2289	287	RA & Met Station	UADA Audit	12	20	94	Memo
2286	287	RA & Met Station	Review of Met Monitoring Plan	11	15	94	Letter
2288	287	RA & Met Station	Met Monitoring Plan	11	7	94	Memo
2295	287	RA & Met Station	Response to OR DEQ Review Comments	11	7	94	Report
2297	287	RA & Met Station	Met Monitoring Plan for the Umatilla Depot	7	15	94	Report
2290	287	RA & Met Station	Hermiston Air Quality & Met Monitoring Plan	1	0	94	Report
2294	287	RA & Met Station	Response to OR DEQ System Audit For UMDA Met	0	0	0	Report
2299	294	Meeting Notes	Quarterly Meeting Notes for 8/2-3/94	10	20	94	Letter

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2017	3	Environ. Permits	Draft Hazardous Waste Permit	4	5	96	Permit
2117	4	Part B Support	Does Tooele Data Demonstrate Compliance?	10	8	96	Memo
1669	4	Part B Support	Utah Federal Court Decision	8	13	96	Legal Doc
1628	4	Part B Support	BDAT Minimum Technology Standard Applcable RCR	3	15	96	Memo
2219	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	16	96	Letter
2195	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	15	96	Letter
2215	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	15	96	Letter
2217	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	15	96	Letter
2223	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	15	96	Letter
2222	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	15	96	Letter
2225	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	15	96	Letter
2224	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	15	96	Letter
2228	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	15	96	Letter
2230	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	15	96	Letter
2229	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	15	96	Letter
2227	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	15	96	Letter
2226	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	15	96	Letter
2246	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	15	96	Report
2267	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	15	96	Rpt/Lttr
2266	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	15	96	Rpt/Lttr
2212	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	15	96	Rpt/Lttr
2231	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	14	96	Letter
2194	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	14	96	Letter
2218	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	14	96	Letter
2197	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	14	96	Letter
2220	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	14	96	Letter
2221	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	14	96	Letter
2234	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	14	96	Letter
2241	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	14	96	Letter
2260	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	13	96	Letter
2216	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	13	96	Letter
2193	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	13	96	Letter
2237	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	13	96	Letter
2238	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	13	96	Letter
2192	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	12	96	Letter
2243	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	12	96	Letter
2244	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	12	96	Letter
2190	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	9	96	Letter
2191	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	9	96	Letter
2188	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	4	96	Letter
2185	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	10	31	96	Letter
2187	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	10	30	96	Letter
2186	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	10	30	96	Letter
2184	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	10	28	96	Letter

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2182	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	10	22	96	Letter
2183	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	10	21	96	Letter
2180	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	10	17	96	Letter
2177	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	9	24	96	Letter
2178	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	9	24	96	Letter
2181	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	9	23	96	Letter
2189	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	9	1	96	Letter
2171	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	8	23	96	Letter
2167	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	8	22	96	Letter
2168	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	8	22	96	Letter
2169	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	8	22	96	Letter
2170	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	8	22	96	Letter
2172	7	Official Comments	Public Comments	8	22	96	Testimony
2165	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	8	13	96	Letter
2179	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	8	11	96	Letter
2175	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	8	1	96	Letter
2174	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	7	10	96	Letter
2214	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	6	14	96	Letter
1786	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	6	13	96	Letter
1787	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	6	13	96	Letter
2164	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	6	13	96	Letter
2176	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	6	12	96	Letter
1791	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	6	12	96	Letter
2256	7	Official Comments	Public Comments From Hermiston Public Hearing	6	10	96	Transcript
1785	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	6	10	96	Letter
2173	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	6	10	96	Letter
2211	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	6	10	96	Letter
2210	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	6	10	96	Letter
2209	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	6	10	96	Letter
2213	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	6	10	96	Letter
2205	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	6	9	96	Letter
2255	7	Official Comments	Public Comments From Pendleton Public Hearing	6	7	96	Transcript
2204	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	6	6	96	Letter
2254	7	Official Comments	Public Comments from Kennewick Public Hearing	6	5	96	Transcript
2206	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	6	2	96	Letter
1784	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	5	30	96	Letter
1790	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	5	30	96	Letter
2200	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	5	29	96	Letter
2201	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	5	29	96	Letter
2202	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	5	29	96	Letter
2232	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	5	29	96	Statemnt
2253	7	Official Comments	Public Comments Received From PDX Pblc Hearing	5	29	96	Testimony
2203	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	5	28	96	Letter
1788	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	5	15	96	Letter

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1783	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	4	29	96	Letter
1789	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	4	26	96	Letter
2198	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	4	26	96	Letter
1782	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	4	25	96	Letter
1781	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	4	19	96	Letter
1780	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	4	15	96	Letter
1779	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	4	12	96	Letter
1778	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	4	11	96	Letter
1777	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	4	9	96	Letter
1776	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	4	7	96	Letter
1773	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	4	5	96	Letter
1771	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	3	29	96	Letter
1770	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	3	20	96	Letter
2196	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	27	95	Letter
2208	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	11	22	95	Letter
2199	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	8	22	95	Letter
2166	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	0	0	0	Report
2245	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	0	0	0	Letter
2242	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	0	0	0	Letter
2240	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	0	0	0	Letter
2239	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	0	0	0	Letter
2233	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	0	0	0	Letter
2236	7	Official Comments	Public Comments	0	0	0	Letter
2235	7	Official Comments	Public Comments	0	0	0	Letter
2232	7	Official Comments	Public Comments	0	0	0	Letter
2207	7	Official Comments	Public Comments Received 4/5/96 to 11/15/96	0	0	0	Drawings
2264	8	Public Notices	UAD Public Comments By CTUIR	11	15	96	Binder
2265	8	Public Notices	UAD Public Comments By Karyn Jones	11	15	96	Binder
1729	8	Public Notices	"Your Opinion counts!"-for 8/22-23/96 EQC Mtg	8	20	96	NewsAdv
1683	8	Public Notices	"Your Opinion Counts!"-Info Meeting Notice	8	17	96	NewsArt
1675	8	Public Notices	"Your Opinion Counts!"-Info Meeting Notice	8	3	96	NewsArt
2263	8	Public Notices	UAD Public Comments 6/17/96-11/15/96	6	17	96	Binder
1565	8	Public Notices	Chance to Comment on Extension,Comment Period	6	17	96	Notice
1566	8	Public Notices	Chance to Comment on Extension, Comment Period	6	17	96	Notice
2158	8	Public Notices	Umatilla Public Hearing, Tape 1, Hermiston	6	10	96	Cassette
2159	8	Public Notices	Umatilla Public Hearing, Tape 2, Hermiston	6	10	96	Cassette
2160	8	Public Notices	Umatilla Demilitarization Public Hearing Tape	5	29	96	Cassette
2161	8	Public Notices	Umatilla Demilitarization Public Hearing Tape	5	29	96	Cassette
2162	8	Public Notices	Umatilla Army Depot Public Hearing, Pndltn, Kn	5	13	96	Cassette
2262	8	Public Notices	UAD Public Comments 5/13/96-6/17/96	5	13	96	Binder
1447	8	Public Notices	Chance to Comments	4	5	96	NewsArt
1562	8	Public Notices	Chance to Comment on Findings and Risk Asses.	4	5	96	Notice
1563	8	Public Notices	Chance to Comment on Proposed Haz Waste Permit	4	5	96	Notice
1564	8	Public Notices	Chance to Comment on Proposed Air Quality Perm	4	5	96	Notice

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1841	8	Public Notices	Fact Sheet for Draft HW Permit	4	5	96	Fact Sheet
1951	9	Governor Corres.	Letter of Concern to EPA re: RCRA issues	1	22	96	Letter
1378	9	Governor Corres.	Response to 2/22&3/7,96 Ltrs from PDeFazio	3	19	96	Letter
1953	9	Governor Corres.	Letter to DeFazio from Governor	4	3	96	Letter
1952	9	Governor Corres.	Letter to Gov from DeFazio	3	25	96	Letter
1531	9	Governor Corres.	Rpt on Status of Umatilla Permitting Decisions	5	31	96	Memo
1967	9	Governor Corres.	GDecker response to Gov letter 10/7/96	11	7	96	Letter
1968	9	Governor Corres.	Letter to WPerry re:EQC	10	14	96	Letter
1966	9	Governor Corres.	Response to D173Letter from JChien	11	8	96	Letter
1077	10	Correspondence	Letter from ROrton to DeFazio	5	6	96	Letter
1671	10	Correspondence	DeFazio's Reponse to Army'comments 7/15/96	7	15	96	Letter
1707	10	Correspondence	White House Correspondence	7	17	96	Letter
1708	10	Correspondence	PMCD memo re: EQC Meeting 8/22/96	8	27	96	Memo
1847	10	Correspondence	Response letter to Wendell Ford	9	14	96	Letter
2261	10	Correspondence	Public Comment Received Ater 11/15/96	11	18	96	Letter
1854	15	CTUIR	Unable to attend EQC Briefing on 4/12/96	4	12	96	Letter
1567	15	CTUIR	CTUIR/SSRP Follow-up on DEQ Briefing to EQC	4	26	96	Letter
1629	15	CTUIR	Response to 4/26/96 letter	5	26	96	Letter
1611	32	Other Reports	M55 Rocket Separation Study	11	22	85	Report
1548	32	Other Reports	US Chem Weapons Destruction Program	9	0	94	Report
1426	55	Alternative Tech	Recommendations for Disposal	3	7	94	Report
1692	55	Alternative Tech	CTUIR Material given to EQC	4	12	96	Comments
1988	55	Alternative Tech	Promise of Alternative Technologies	10	30	96	Report
1810	80	CSEPP	Governor's CSEPP concerns for FEMA and Army	7	1	96	Letter
1697	80	CSEPP	UMCDF OEM Presentation to EQC-invitation	8	15	96	Letter
1698	80	CSEPP	UMCDF OEM Presentation to EQC-invitation	8	16	96	Letter
1699	80	CSEPP	UMCDF OEM Presentation to EQC-invitation	8	16	96	Letter
1700	80	CSEPP	UMCDF OEM Presentation to EQC-invitation	8	16	96	Letter
1701	80	CSEPP	UMCDF OEM Presentation to EQC-invitation	8	16	96	Letter
1702	80	CSEPP	UMCDF OEM Presentation to EQC-invitation	8	16	96	Letter
2083	80	CSEPP	Comments to be entertained by EQC	11	13	96	Letter
2075	80	CSEPP	November 5-6, 1996 Agenda Proposal	10	14	96	Memo
2077	81	CAIRA Plan & Update	Change 1 to UMCD CAIRA Plan, dated 4/96	7	31	96	Memo
2269	87	Combustion Risk	Draft Pre-Trial RA Proposed at Umatilla Chem.	4	0	96	Report
2268	87	Combustion Risk	Draft Pre-Trial RA Proposed at Umatilla Chem.	4	0	96	Report
2257	92	EQC Documents	Tape 1, Sides 1 & 4,EQC in Pendleton	11	22	96	Cassette
2258	92	EQC Documents	Tape 2, Side 6,2, and 5, EQC in Pendleton	11	22	96	Cassette
2259	92	EQC Documents	Tape 3,Side 3, EQC in Pendleton	11	22	96	Cassette
2044	92	EQC Documents	DEQ Directors Recommendations to EQC on BAT	11	22	96	Fax
2045	92	EQC Documents	Proposed Prmt Conditions from Commission Mtgs	11	22	96	Attch B
2046	92	EQC Documents	Dept. Recommended Permit Cndtns from Commsn Mt	11	22	96	Cndtn
2047	92	EQC Documents	Qstns about proposed UMCDF	11	21	96	Memo
2050	92	EQC Documents	Transmittal of Public Comments	11	18	96	Memo
2048	92	EQC Documents	Concerns regarding Emergency Preparedness Issu	11	15	96	Letter

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2146	92	EQC Documents	Tape 1, Side 1 and Side 3	11	15	96	Cassette
2147	92	EQC Documents	Tape 2, Side 2 and Side 4	11	15	96	Cassette
2148	92	EQC Documents	Tape 3,	11	15	96	Cassette
2049	92	EQC Documents	Response to Umatilla Documents for 11/15/96	11	14	96	Memo
2051	92	EQC Documents	EQC Meeting 11/14-15/96 in Portland	11	14	96	Agenda
2149	92	EQC Documents	Tape 3	11	14	96	Cassette
2150	92	EQC Documents	Tape 2, Side 2 and Side 4	11	14	96	Cassette
2151	92	EQC Documents	Tape 1, Side 1 and Side 3	11	14	96	Cassette
2055	92	EQC Documents	Transmittal of Umatilla Doc in Prep for 11/15/	11	6	96	Memo
2056	92	EQC Documents	Best Available Technology Finding	11	5	96	Memo
2057	92	EQC Documents	Notice to Persons Interested in Proposed Incin	11	0	96	Notice
2072	92	EQC Documents	Copy of OSU Dioxin Paper	10	31	96	Memo
2058	92	EQC Documents	Rpt to Questions on Dioxin Formation at UMCDF	10	29	96	Report
2062	92	EQC Documents	EQC Work Session 9-27-96	10	27	96	Minutes
2053	92	EQC Documents	EQC Meeting 11/22/96 in Pendleton	10	24	96	Agenda
2052	92	EQC Documents	EQC Meeting 11/22/96 in Pendleton	10	23	96	Agenda
2054	92	EQC Documents	EQC Meeting 11/14-15/96 in Portland	10	23	96	Agenda
2059	92	EQC Documents	EQC Minutes 10/11/96 Regular Meeting	10	11	96	Minutes
2060	92	EQC Documents	Handout for 10-11-96 EQC Meeting	10	11	96	Hndout
2157	92	EQC Documents	EQC Meeting, Umatilla Portion	10	11	96	Cassette
1825	92	EQC Documents	EQC Meeting Agenda for 10/10-11/1996	10	10	96	Agenda
2061	92	EQC Documents	EQC Work Session 10-10-96	10	10	96	Minutes
2137	92	EQC Documents	Side 6 and Side 8	9	27	96	Cassette
2138	92	EQC Documents	Side 5 and Side 7	9	27	96	Cassette
1822	92	EQC Documents	EQC Meeting Agenda for 9/27/96	9	27	96	Agenda
1823	92	EQC Documents	Discussion of proposed permit condition-UMCDF	9	27	96	Report
1824	92	EQC Documents	Discussion of ORS466.055 Findings	9	27	96	Report
2063	92	EQC Documents	Discussion of ORS 466.055b Findings	9	27	96	Memo
2071	92	EQC Documents	Executive Summary from the NRC report on AltTe	9	25	96	Memo
1821	92	EQC Documents	Response to HLorenzen's 9/5/96 letter	9	17	96	Letter
2064	92	EQC Documents	EQC 9-27-96 Meeting in Portland	9	13	96	Agenda
2070	92	EQC Documents	November EQC Meeting	9	13	96	Memo
1820	92	EQC Documents	EQC Worksession 9/27/96 list of goals	9	12	96	Memo
1775	92	EQC Documents	Leak incindent at Tooele, Utah	9	10	96	Report
1774	92	EQC Documents	Public survey and public info activities	8	31	96	Memo
1769	92	EQC Documents	Agenda Item H, EQC Meeting 8/23/96 BAT	8	28	96	Letter
1768	92	EQC Documents	UMCDF OEM Presentation to EQC	8	27	96	Letter
1819	92	EQC Documents	EQC Meeting notes from 8/22/96	8	27	96	Notes
2139	92	EQC Documents	Tape 1, EQC Meeting	8	23	96	Cassette
2140	92	EQC Documents	Tape 2, EQC Meeting	8	23	96	Cassette
2141	92	EQC Documents	Tape 3, EQC Meeting	8	23	96	Cassette
1706	92	EQC Documents	EQC Meeting Agenda for 8/22-23/96	8	22	96	Notice
1930	92	EQC Documents	Written Testimony from KJones 8/22/96	8	22	96	Reports
1931	92	EQC Documents	Letter from Rep.Chuck Norris	8	22	96	Letter

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Item #	Heading #	Heading	Document	MM	DD	YY	Type
2144	92	EQC Documents	Tape 1, EQC Meeting, Afternoon Session	8	22	96	Cassette
2145	92	EQC Documents	Tape 2, EQC Meeting, Afternoon Session	8	22	96	Cassette
2142	92	EQC Documents	Tape 1, EQC Meeting, Evening Session	8	22	96	Cassette
2143	92	EQC Documents	Tape 2, EQC Meeting, Evening Session	8	22	96	Cassette
1929	92	EQC Documents	DWysocki unable to attend August EQC meeting	8	13	96	Letter
1772	92	EQC Documents	Request for attendance to 8/22/96 EQC Mtg	8	8	96	Letter
1928	92	EQC Documents	UAD items for 8/22-23/96 EQC Meeting	8	8	96	Memo
1704	92	EQC Documents	Transmittal of additional info on UMCDF	8	7	96	Memo
1705	92	EQC Documents	Transmittal of info for EQC Meeting 8/22-23/96	8	7	96	Fax
1817	92	EQC Documents	EQC 7/11/96 worksession R.A.response issues	7	11	96	Report
1818	92	EQC Documents	Chemical Demil Program presentation for 7/11/9	7	11	96	Report
1927	92	EQC Documents	Transmittal of "US Chem Destr.Program:Views...	7	3	96	Memo
1602	92	EQC Documents	Transmittal of Documents to EQC	7	2	96	Memo
1601	92	EQC Documents	Invitation to submit Alt.Tech videos	7	2	96	Letter
1600	92	EQC Documents	Invitation to submit Alt.Tech videos	7	2	96	Letter
1599	92	EQC Documents	Invitation to submit Alt.Tech videos	7	2	96	Letter
1815	92	EQC Documents	Invitation to submit Alt.Tech videos	7	2	96	Letter
1626	92	EQC Documents	EQC Meeting Agenda for 6/11-12/96	6	27	96	Agenda
1652	92	EQC Documents	Interagency Agreement - DEQ & OSU	6	25	96	Agreemnt
1625	92	EQC Documents	Response to James Quigley 5/30/96 letter	6	24	96	Letter
1551	92	EQC Documents	Ltr to JHaley w/MHarrison Testimony to EQC	5	31	96	Letter
1552	92	EQC Documents	Ltr to JGorrell requesting additional info	5	31	96	Letter
1553	92	EQC Documents	May 17 Umatilla Discussion list of speakers	5	17	96	Memo
1926	92	EQC Documents	Karyn Jones' Written Testimony for 5/17/96 EQC	5	17	96	Reports
2065	92	EQC Documents	Status of Emergency Response	5	17	96	Prsntation
2066	92	EQC Documents	Material Submitted by Karyn Jones	5	17	96	Report
2067	92	EQC Documents	Comments of Destruction of Chem Weapons at UAD	5	17	96	Cmmnts
1513	92	EQC Documents	EQC Worksession Agenda 5/16/96	5	16	96	Agenda
1583	92	EQC Documents	EQC Meeting Agenda for 5/16-17/96	5	16	96	Agenda
1584	92	EQC Documents	Air Quality Permit Overview for 5/16/96 EQC	5	16	96	Overheads
1925	92	EQC Documents	EQC Worksession air presentation 5/16/96	5	16	96	Overheads
2135	92	EQC Documents	EQC Work Session Potential Alt. to Incin	5	16	96	Video
2136	92	EQC Documents	EQC Work Session Potential Alt. to Incin	5	16	96	Video
2152	92	EQC Documents	EQC Work Session, Tape 1	5	16	96	Cassette
2153	92	EQC Documents	EQC Work Session, Tape 2	5	16	96	Cassette
2154	92	EQC Documents	EQC Work Session, Tape 3	5	16	96	Cassette
2155	92	EQC Documents	EQC Work Session, Tape 4	5	16	96	Cassette
2156	92	EQC Documents	EQC Work Session, Tape 5	5	16	96	Cassette
2068	92	EQC Documents	Umatilla Chemical Weapons Destruction Permits	5	7	96	Letter
1924	92	EQC Documents	Transmittal of Alternative Technologies info	5	3	96	Memo
1264	92	EQC Documents	Handout to EQC from Brett McKnight, DEQ	5	0	96	Binder
2069	92	EQC Documents	Delay Granting of the Army's Permit	4	30	96	Letter
1919	92	EQC Documents	Minutes for 4/12/96 EQC Meeting	4	22	96	Minutes
1512	92	EQC Documents	Letter to Mick Harrison	4	19	96	Letter

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Item #	Heading #	Heading	Document	MM	DD	YY	Type
1582	92	EQC Documents	Response to OEC ltr dated 4/9/96 by JCharles	4	18	96	Memo
1920	92	EQC Documents	Emergency Update for 5/17/96 EQC Meeting	4	18	96	Letter
1921	92	EQC Documents	Emergency Update for 5/17/96 EQC Meeting	4	18	96	Letter
1922	92	EQC Documents	Emergency Update for 5/17/96 EQC Meeting	4	18	96	Letter
1923	92	EQC Documents	Participation in Alts to Incin. discussion	4	18	96	Letter
1502	92	EQC Documents	HW Permit Presentation - Overheads	4	12	96	Overheads
1501	92	EQC Documents	Confirmation of Attendance to May 16 mtg	4	10	96	Letter
1500	92	EQC Documents	Letter from John Charles re: EQC Decisions	4	9	96	Letter
1918	92	EQC Documents	Umatilla Chemical Weapons Incinerators	3	15	96	Memo
1581	92	EQC Documents	Minutes of the 250th Meeting	2	23	96	Minutes
1216	92	EQC Documents	Presentation to the EQC	2	9	96	Letter
1217	92	EQC Documents	Presentation to the EQC	2	6	96	Letter
1042	92	EQC Documents	Provide Comments; Video	12	26	95	Letter
1032	92	EQC Documents	Adoption of Rules Chapter 340	4	25	86	Memo
2301	255	Alt Technology	M4 CEP Tour	0	0	0	Video
2302	255	Alt Technology	EcoLogic Toronto Update	0	0	0	Video
2303	255	Alt Technology	EcoLogic Chemical Demilitarization Update	0	0	0	Video

Appendix 3

SUMMARY OF PUBLIC COMMENTS AND COMMISSION RESPONSES

Hazardous Waste Treatment and Storage Permit and
ORS 466.055 and 466.060 Criteria

U.S. Army Umatilla Chemical Depot
Umatilla Chemical Demilitarization Facility
I.D. Number: OR6 213 820 917

February 7, 1997

This Response to Comments document has the following Sections:

I. INTRODUCTION

The U.S. Army has applied for a hazardous waste treatment and storage permit to incinerate chemical agent munitions. The incineration treatment of the chemical agents, along with the various munition components consisting of explosives, propellants, and metal casings, is sometimes referred to as "demilitarization."

The Department of Environmental Quality reviewed the hazardous waste permit application and determined that the application was complete in accordance with Title 40 Code of Federal Regulations [40 CFR] Section 124.3.[1] The Department then issued for public comment the draft hazardous waste permit and the air contaminant discharge permit. Also issued for public comment was the Pre-Trial Burn Risk Assessment [PreRA], and, an invitation to comment on the ORS 466.055 and 466.060 criteria pursuant to which the Environmental Quality Commission must make affirmative findings before it can issue the hazardous waste permit. The comment period ended November 15, 1996.[2] At a meeting held on November 22, 1996, the Department was directed by the Commission to finalize the hazardous waste permit decisions.

[1] Adopted as Oregon Rule at OAR 340-100-002.
[2] The original comment period was extended on June 15, 1996.

II. Comments Received

All comments received during the comment period were provided to the Commission for its review. The comments were also placed in the administrative record maintained at the Department office in Bend.

At the November 22, 1996 meeting the Department provided to the Commission a summary of the comments received during the comment period. In general, the following statements can be made about the comments received.

Statistics

- 188 submittals (both verbal testimony and written comments) were received and entered into the administrative record. A submittal may have contained anywhere from one comment to tens of comments. Two submittals were noted but did not contain any testimony.
- Out of the 188 submittals, 67 were from the immediate region (e.g., Hermiston), 33 were from the region (e.g., Tri-Cities and Pendleton), and 88 were from Out-of-Region (e.g., Portland).
- Of the 67 submittals received from the immediate region, 48 (72%) were in favor of issuing the permit; 19 (28%) were not in favor of issuing the permit).
- Of the 33 submittals received from the region, 12 (36%) were in favor of issuing the permit; 21 (64%) were not in favor of issuing the permit.
- Of the 88 submittals from out-of-region, 6 (7%) were in favor of issuing the permit; 82 (93%) were not in favor of issuing the permit.

General

- The vast majority of the comments were directed towards the Commission's findings of the ORS criteria. Very few submittals dealt directly with specific conditions of the hazardous waste permit or specific items with the PreRA.
- Based on testimony from the several Commission meetings, the Commission directed that several additional permit conditions be included in the hazardous waste permit.
- Submittals received from the U.S. Army and EPA Region 10 did contain many comments on specific conditions of the permit.

Issue: Incineration Is The Best Available Technology

120 submittals contained comments regarding whether incineration represents best available technology. The significant comments are listed below.

Agree

- Incineration has been found by independent experts to be an acceptable technology
- JACADS and Tooele are operating effectively and efficiently.
- Currently, incineration is best available technology.
- Alternative technologies are immature for chemical agent.
- There are no viable alternative technology for metal parts and energetics except incineration.
- EPA and Department of Health and Human Services contends that incineration is a safe and proven method.
- Continued storage is not a technology.
- Incineration has more control than similar industrial applications.
- Need more time to develop information on alternative technologies.

Does Not Agree

- Incineration is unsafe and costly.
- JACADS and Tooele have had experiences of upsets and operational problems.
- Incineration emits toxic chemicals and would/could effect human health, the ecology, and agricultural crops.
- "Closed-loop" technologies are better because they do no emit toxic chemicals.
- Reconfiguration and storage, or continued storage alone, and then wait for a better treatment technology is preferable.
- Other countries are using alternative technologies.
- Some alternative technologies have commercial scale applications.

Issue: The Facility Will Not Cause An Adverse Effect To Human Health Or The Environment

66 submittals contained comments regarding whether an incineration facility is needed. The significant comments are listed in the following column.

Agree

- The permit should be issued to get rid of the threat posed by chemical agent munitions
- Findings and recommendations from the NRC conclude that incineration is safe
- Delays will cause increased exposure from leaks
- Incineration is a safe technology
- Johnston Atoll ecological monitoring has shown no adverse effect

Does Not Agree

- A comparative assessment between incineration and alternative technologies is necessary to reach a decision.
- Incineration will emit dioxins and other toxins which at low dosages will create human health and environmental harm.
- The Pre-Trial Burn Risk Assessment is flawed because it omitted issues such as not evaluating certain pathways, not evaluating synergistic effects, not accounting for all the potential chemical emissions, etc.,
- The Chemical Stockpile Emergency Preparedness Program (CSEPP) is not prepared; the permit

should not be issued until it is. Sirens are not working, schools are not pressurized, inadequate resources at local level, the Emergency Operations Center is not pressurized and must use gas masks in an emergency, inadequate notification to immediate community, etc.,.

Issue: Applicant Has Demonstrated Ability And Willingness To Operate The Facility In Compliance, And, Applicant Has Demonstrated Financial And Technical Capability.

24 submittals contained comments regarding whether the Applicant (U.S. Army) has demonstrated adequate capability. The significant comments are listed below:

Agree

- Tooele and JACADS are built and operated well
- There is trust in the government that they have the expertise and care to insure safe operation

Does Not Agree

- The Army has not been able to operate the JACADS and Tooele facilities adequately
- The Army has had a history of misrepresentation, misinformation, and deceit
- The Army has been fined at JACADS by EPA for non-compliance

Issue: The Facility Is Needed

41 submittals contained comments regarding whether an incineration facility is needed. The significant comments are listed below.

Agree

- The risk of storage, and storage operations are more than the risk of incineration

Does Not Agree

- Risk of storage is exaggerated and there is no need to rush to incinerate
- The risk of storage can be lessened by reconfiguration

Issue: Public Participation

27 submittals contained comments regarding public participation. The significant comments are listed below.

Agree

- Commenters appreciated the opportunity to address the Commission face-to-face
- Citizens have been active and informed on the project
- Public comment period was extended

Does Not Agree

- The State has not engaged in a government-to-government relationship with the Confederated Tribes of the Umatilla Indian Reservation [CTUIR]
- DEQ has acted as an advocate of incineration, or, not as an advocate for the environment

- DEQ has maintained an office in Hermiston
- Commission and Department decision-makers were not at some public forums
- There is too much information to review and not enough time for people to understand all the issues

Various Issues:

Several submittals contained comments regarding various issues. These issues mentioned are listed below.

Agree with Permitting

- The Chemical Stockpile Emergency Preparedness Program (CSEPP) is not prepared; the permit should be issued to get rid of the threat posed by chemical agent munitions.
- Objection to commenters from out-of-area trying to stop the project
- There is adequate oversight for the project
- Willing to accept processing risk over risk of continued storage
- There has been a multitude of research and studies on the project
- Munitions are deteriorating with age
- Transportation is not an option

Does Not Agree with Permitting

- Dissatisfaction with the Environmental Impact Statement
- Issues of Environmental Justice
- Oregon should follow lead of other states trying to halt incineration
- Issues of previous exposures from Hanford
- There should not be a delay in permitting the facility
- No import of other waste should be allowed Federal law prohibits transportation so the stockpile must stay and be destroyed
- The stockpile should be moved to Tooele, Utah or JACADS
- The need to limit operations during adverse weather conditions
- The Chemical Stockpile Emergency Preparedness Program is not adequately ready. Sirens are not working, schools are not pressurized, inadequate resources at local level, the Emergency Operations Center is not pressurized and must use gas masks in an emergency, inadequate notification to immediate community, etc.,

III. Direction From The Commission

At the November 22, 1996 meeting, the Commission made a unanimous finding that the baseline incineration system as proposed by the U.S. Army is best available technology. After making this finding, the Commission then deliberated on the remaining ORS 466.055 and 466.060 criteria. The Commission stated that the remaining criteria could be found to be made in the affirmative, and directed that the Department and the Attorney General draft an Order for Commission issuance.

After deliberations on the remaining findings, the Commission reviewed potential permit conditions to be included. The administrative record of this meeting indicates what specific conditions are needed to be included in the hazardous waste permit. The permit conditions, as deliberated by the Commission, have been added to the final hazardous permit (see Attachment A for a listing of the permit conditions).

The Commission also directed the Department to review the Army's comments and make the appropriate technical corrections to the hazardous waste permit, as well as corrections from other comments. The Department has conducted this review and made the appropriate changes. A discussion of these changes, as required by 40 CFR 124.17(a),[3] follows in section IV.D of this document.

IV. RESPONSE TO COMMENTS

IV.A. Commission Findings

The Order that the Commission issued on February 7, 1997, serves as the formal decision and Response to Comments. The Order makes effective the affirmative findings for the ORS 466.055, 466.060, and OAR 340-120 criteria, and, summarizes some of the important issues, along with the documentation and testimony (from the Commission's administrative record) used in reaching the hazardous waste decisions.

IV.B Summary of Commission Findings

The Order issued by the Commission on February 7, 1997 stated the following about the findings pursuant to ORS 466.055, 466.060, and OAR 340-120:

For the finding that the baseline incineration system is best available technology: The Commission heard testimony from alternative technology vendors, representatives of the Army (both representing alternative technology and incineration), and other experts and stakeholders from the public, both from within the region and without. The Commission also toured the similar-site facility located near Tooele, Utah.

The Commission deliberated on the issues of operational history at Johnston Atoll and Utah, issues of dioxin emissions and combustion by-product formation, issues of possible neutralization of mustard agent and other possible technologies, and issues of availability and schedule. The Commission reviewed many written comments and heard testimony regarding alternatives. The Commission was particularly persuaded by the BEST AVAILABLE TECHNOLOGY REPORT prepared for the Department by Ecology and Environment, Inc., the REPORT ON DIOXINS by Dr. Kristiina Iisa, Oregon State University, October 1996, and testimony of Army Assistant

[3] Adopted as Oregon Rule by OAR 340-100-002.

Secretary Decker regarding potential neutralization of mustard agent. The Commission has responded in the affirmative by vote on November 22, 1996 and issued an Order dated February 7, 1997 that the baseline system is best available technology.

For the finding of meeting the 250 foot setback: The Commission reviewed the Department's staff report dated November 15, 1996 and responded in the affirmative that the facility meets this criteria.

For the finding of owner and operator capability: The Commission heard testimony from representatives of environmental organizations, the Army, and from the public regarding the operational histories at Johnston Atoll and Tooele Chemical Disposal Facility. From the testimony and comments, the Commission responded in the affirmative that the owner and operator has demonstrated adequate capability.

For the finding of adequate compliance history: As above, the Commission heard testimony of representatives from environmental organizations, the Army, and from the public regarding the operational histories at Johnston Atoll and Tooele Chemical Disposal Facility. The Commission also reviewed the Department's November 1996 staff report regarding in detail the Army's compliance history at Johnston Atoll. From the testimony and comments, the Commission responded in the affirmative that the owner and operator has demonstrated adequate capability.

For the finding that there is a need for the facility: The Commission reviewed written comments and heard testimony regarding the need. The Commission heard issues regarding the potential to disassemble and store munitions, or even continue storage until better technologies are developed, rather than continue with incineration. The Commission concluded that UMCDF will reduce, and eventually eliminate the risk to surrounding communities from continued storage of the chemical agents and munitions; therefore the need for UMCDF is demonstrated because operation of the proposed facility will result in a higher level of protection. From the testimony and comments, the Commission responded in the affirmative.

For the finding that the facility will have no major adverse effect on public health and safety, or the environment: The Commission reviewed written comments and heard testimony regarding the potential effects from the UMCDF. The Commission became aware of issues of dioxin and furan formation, known and unknown combustion by-products of incineration, and of design controls proposed for the UMCDF. The Commission was particularly persuaded by the DRAFT PRE-TRIAL BURN RISK ASSESSMENT prepared for the Department by Ecology and Environment, Inc., REPORT ON DIOXINS by Dr. Kristiina Iisa, Oregon State University, PERSPECTIVES ON THE UMATILLA QUANTITATIVE RISK ASSESSMENT RESULTS prepared by SAIC, September 1996, DEQ and Ecology and Environment RESPONSE TO RISK ASSESSMENT ISSUES, and testimony of Gary Boyd, SAIC, before the Commission on November 22, 1996. From the testimony and comments, the Commission responded in the affirmative.

IV.C Changed Permit Conditions Based on Commission Direction

As part of its deliberations to make findings on the ORS criteria, based on the testimony from the Applicant, the Department, and from interested parties, and based on the comments and concerns raised by interested parties on emergency response issues, the Commission decided that additional permit conditions should be made part of the hazardous waste permit. In accordance with 40 CFR 124.17(a)(1),[4] Attachment A lists the permit conditions that have been added or changed. Through its deliberations, these conditions were included in the hazardous waste permit by the Commission because they are deemed necessary to protect human health and the environment.

IV.D. Technical Changes to Hazardous Waste Permit

At the November 22, 1996 Commission meeting, the Department was directed to incorporate the appropriate technical changes to the permit that do not affect policy decisions. The Department reviewed comments made by the U.S. Army and EPA Region 10 and made some permit condition changes based on significant comments.

In accordance with 40 CFR 124.17[4] and at the direction of the Commission, the following significant changes have been made to the hazardous waste permit.

IV.D.1 Technical Significant Changes Based on U.S. Army Comments

The following comments were submitted by the Army November 12, 1996 and entered as comment no. 143. The following Army comment numbers are from that submittal.

- Based on Army comment no. 9, the Department has changed permit condition I.W to allow for ten days reporting, instead of three, in order to allow the Permittee to report timely, and to allow for a more thorough report.
- Based on Army comment no. 22, the Department has changed permit condition IV.H.4. to allow primary sumps to be changed out for only those primary sump systems that detect liquids in interstitial areas (between liners), instead of all sumps per campaign/annually as proposed. The Department determined that based on the small size, the potential for tank system compromised by too much "chipping out" of the surrounding concrete, and the design of the buildings themselves which minimize releases to the environment, it would be better just to remove, inspect, and repair those primary sump systems that detect leaks between the primary liner and the secondary containment.

[4] Adopted as Oregon Rule at OAR 340-100-002.

- Based on Army comments no. 25 and no. 26, the Department agrees to the requirement for Total Organic Carbon (TOC) to be measured during the trial burns and not as a continuous emissions monitor. There is not a continuous emission monitor for TOC. The Department has eliminated permit condition VI.A.3.iii., and has added permit condition VI.A.5.iii.c.
- Based on Army comment no. 45, the Department agrees that sulfur dioxide (SO_2), hydrocarbon (HC), and hydrogen chloride (HCl) do not need to be measured in the Metal Parts Furnace discharge airlock. It is sufficient to measure the airlock for agent to protect human health. The Department has changed Attachment 4.

IV.D.2 Technical Significant Changes Based on U.S. EPA Region 10 Comments

The Department met with U.S. Environmental Protection Agency Region 10 on October 28-29, 1996 to discuss comments that Region 10 had. The Department developed a memorandum of these comments and placed it in the administrative record as comment no. 187 and as administrative record index no. 2252. The comment numbers referenced below are the EPA comment numbers found in the memorandum.

- Based on EPA comment no. 19, the Department agrees that an assessment and an appropriate permit modification must be submitted to address secondary containment for the MDB carbon filters units. This condition is consider necessary and consistent with the Army review of the Tooele Chemical Disposal Facility detection of agent leaks at the carbon filters units. The Department has added permit condition II.O.10 to require an assessment within 360 days of the effective date of the permit.
- Based on EPA comment no. 36, the Department agrees that the Brine Reduction Unit, which is a unit factored in the Pre-Trial Burn Risk Assessment, should have the same level of notification requirement for emission exceedances as for the incinerator units. Therefore, the Department has added permit condition V.A4.vii to include a notification requirement if emission rates are exceeded.
- Based on EPA comments no. 43 and no. 71, the Department agrees that additional chemical-specific feed rate limits should be added in addition to the munition feed rate limits. The additional feed rate limits will help insure that any potential variations in the chemical makeup of the waste will not exceed emission limits which have been determined to be protective in the Pre-Trial Burn Risk Assessment. The Department has revised Tables 6-1, 6-4, 6-8, and 6-12, and, permit conditionVII.B.3.i.

IV.E. Other Changes to the Permit

At the November 22, 1996 Commission meeting, the Department was directed to also make minor (i.e., insignificant) changes. The U.S. Army and U.S. Environmental Protection Agency made many minor comments regarding the draft hazardous waste permit.

The Department reviewed the comment and made appropriate changes. The changes in nature were: Typographical errors, editorial changes, wording change for clarification, modifications to aid in enforcement but not changing the requirement, changes to make condition consistent with the Part B permit application, changes to add more specificity but not changing the requirement, and changes to add more stringency without altering operations as proposed by the Permittee.

IV.F. Changes That Were Not Made to the Permit

As stated before, many comments were received from the Army and EPA Region 10, and just a few from others. The Commission and Department reviewed these comments and decided that there inclusion in the hazardous waste permit is not warranted.

ATTACHMENT A

1) *STORAGE RISK - MODIFICATION TO THE OPENING STATEMENT OF THE PERMIT INTRODUCTION FOUND ON PAGE 3*

The Permittee shall proceed expeditiously in procuring a contractor, beginning construction and commencing operation of the Umatilla Chemical Disposal Facility (UMCDF) in order to eliminate the significant risk to human health and the environment posed by the continued storage of the chemical weapons and chemical agents at the Umatilla Chemical Storage Depot.

2) *CSEPP READINESS- PERMIT CONDITIONS*

II.H.4. The Permittee shall submit within 150 days of the effective date of the permit and every 180 days thereafter until all agent at the Depot has been destroyed; a written progress report to the Department on the status of the Chemical Stockpile Emergency Preparedness Program (CSEPP). The report shall evaluate CSEPP's readiness for responding to an incident at the Umatilla Chemical Depot and should address at a minimum, status of community emergency sirens and distribution of tone alert radios of the Alert Notification System (ANS); the ability to provide off-site chemical agent monitoring and decontamination during an incident, off-site triage and treatment of casualties; and, the state of enhanced sheltering and positive pressurization of buildings, such as schools and hospitals, where substantial numbers of persons can be expected to gather daily. [40 CFR 270.32(b)(2)]

II.H.4.i. The Permittee shall not commence any thermal shakedown, trial burn, or post-trial burn activity, as defined in Module VI, until the Department has notified the Permittee in writing that it has received written notification from the Governor of the State of Oregon, or his designee, that an adequate emergency response program is in place and fully operational for protecting the general population (Chemical Stockpile Emergency Preparedness Program [CSEPP]). The written determination of the Governor (or his designee) shall be placed in the administrative record.[40 CFR 270.32(b)(2)]

3) *REMOVAL OF THE UMCDF STRUCTURES AT CLOSURE - PERMIT CONDITIONS*

II.J.9 Following submittal of all successful closure decontamination certifications in accordance with permit condition II.J.6., the Permittee shall dismantle, remove, and properly manage the disposal of the Munition Demilitarization Building (MDB) to an approved disposal facility. All other structures (e.g., buildings, parking areas, underground structures, fences, etc.,) within the boundary of the UMCDF shall also be properly managed and removed to a disposal facility. All areas where structures have been removed shall be reclaimed. If the Umatilla Chemical Depot - Local Reuse Authority (UCD-LRA) identifies a use for any of the structures, except the MDB, the Permittee may request a modification to this permit condition as a class 2 modification in accordance with 40 CFR §270.42(b) and 40 CFR §270.32(b)(2) to accommodate such use.

4) ***PAS CARBON FILTER UNIT AND EMISSION TO THE CARBON FILTERS - PERMIT CONDITIONS***

II.R. The Permittee shall build and operate the Pollution Abatement System (PAS)/PAS Filter Systems for each incinerator in accordance with the appropriate drawings of Volume 5, Attachment D-3 and Volume VII of the application, Sections D-5B-02, D-5B-07, D-6B-02, D-6B-04, D-7B-02, D-7B-05, D-8B-02, D-8B-04, and D-8B-05. Removal of any component of the PAS Filter Systems, including but not limited to, the quench tower, venturi scrubber, packed scrubber tower, demister, or carbon filter system shall be a Class 3 permit modification and shall require Commission approval.

VI.A GENERAL CONDITIONS DURING SHAKEDOWN, TRIAL-BURN AND POST TRIAL-BURN FOR ALL THE INCINERATORS AT THE UMCDF SITE.

VI.A.1 CONSTRUCTION AND MAINTENANCE [40 CFR§264.31](trial burn stds.)

vi. The Permittee shall maintain and operate each incinerator during shakedown, trial burn and post-trial burn periods in accordance with the operating requirements specified in this permit. Each incinerator shall meet the applicable performance standards specified in permit conditions VI.B.1., VI.C.1., VI.D.1., and VI.E.1. before entering each incinerator's carbon filter system.

VII.A.8 GENERAL OPERATION (normal operation standards)

The Permittee shall maintain and operate each incinerator during shakedown, trial burn and post-trial burn periods in accordance with the operating requirements specified in this permit. Each incinerator shall meet the applicable performance standards specified in permit conditions VII.B.2., VII.C.2., VII.D.2., and VII E.2. before entering each incinerator's carbon filter system.

5) ***EOC POSITIVE PRESSURE - PERMIT CONDITIONS***

II.H.5. For the UCD Emergency Operations Center (EOC) that gathers or disseminates information used to respond to off-Depot releases, the Permittee shall have a positive-pressurized Emergency Operations Center (EOC) that is adequately staffed 24 hours a day, 7 days a week. For this permit condition, "positive-pressurized" shall mean that ambient non-air vapors can not enter during times of emergency training, in the event of an actual emergency, or when tested on request by a Department inspector. The EOC must be pressurized within 300 days of the effective date of this permit, and the EOC is to comply with the staffing requirement within 90 days of the effective date of this permit.

6) ***ARMY ASSURANCE OF INDEPENDENT OVERSIGHT - PERMIT CONDITIONS***

II.E.5. The Permittee shall submit, within 180 calendar days of the effective date of this permit, a written program that describes the independent oversight process for the demilitarization construction activities, health and safety operations, and chemical agent process/handling operations at the UMCDF site. All reports generated by the oversight activities described in this report and reports of independent investigations shall be made available to the Department within 15 days of report finalization, in order for the Director of the Department to attest to the effectiveness of the independent oversight program. With written direction from the Department, the Permittee shall place such

inspection reports in a public repository in Hermiston, Oregon. In the case of special independent investigations caused by unique and non-routine incidents, the Permittee shall notify the Department of the initiation of the investigation within 24 hours of the time the Permittee becomes aware of the investigations. Upon request by the Department or Commission, the permittee shall provide an updated report describing the independent oversight program that incorporates all appropriate additions and changes in response to any deficiencies or requested changes. An independent oversight review shall be conducted on a periodic basis and when specifically requested by the Department or Commission. If the Commission is not satisfied with the independent oversight program or the results of the independent investigations, the Commission may issue an order to halt immediately all operations.

7) ***SHUTDOWN CONDITIONS - PERMIT CONDITIONS***

I.C.2. In accordance with ORS 466.170, the Commission may revoke this permit after public hearing upon a finding that the Permittee has violated any provision of ORS 466.005 to 466.385 and 466.890 or rules adopted pursuant thereto or any material condition of the permit, subject to review under ORS 183.310 to 183.550.

I.C.3. In accordance with ORS 466.200, if the Department or Commission finds that there is reasonable cause to believe that a clear and immediate danger to the public health, welfare or safety or to the environment exists from the continued operation of the site, the Department may halt demilitarization operations at the UMCDF. Non-compliance with the Department's written notification shall be a violation of this permit condition. Resumption of operations shall be initiated only upon written approval of the Department.

I.L.2. In accordance with ORS 466.180(1), the Department or Commission may limit, prohibit, or otherwise restrict storage and treatment operations at the UMCDF upon receipt of information that indicates non-compliance with permit condition I.L.1. The Department shall invoke such restrictions by written notification that specifies actions that the Permittee must take to comply. Non-compliance with the Department's written notification shall be a violation of this permit condition.

8) ***LIABILITY ISSUE - PERMIT CONDITIONS***

II.M. The Permittee must provide the liability coverage for sudden-and-accidental-occurrence requirements, as specified in 40 CFR §264.147, and provide liability insurance in accordance with ORS 466.105(5), and 40 CFR §264.147(a) unless exempted by state or federal law.

9) ***BAD WEATHER CONDITIONS - PERMIT CONDITIONS***

II.A.3. The Permittee shall submit to the Department a request for a Class 2 permit modification, within 180 days of the effective date of this permit, identifying the standard operating procedures that will be followed by Umatilla Chemical Depot and UMCDF personnel for handling and transporting munitions from the storage igloos to the UMCDF site, and for hazardous waste treatment, during inclement weather or adverse wind conditions. The Standard Operating Procedures must include a description of the weather conditions, in addition to the procedures that are to be followed by UCD and UMCDF personnel.

10) *BASELINE MONITORING - PERMIT CONDITIONS*

II.A.4.i. Within 180 days of the effective date of the permit, the Permittee shall submit for Department review and approval a Comprehensive Monitoring Program (CMP) workplan to implement a program that will confirm results of the Pre-Trial-Burn and Post-Trial-Burn Risk Assessments for each of the areas described: Zone 1 - the Umatilla Chemical Demilitarization Facility to the Umatilla Chemical Depot fenceline, Zone 2 - the Umatilla Chemical Depot fenceline out to a fifty-kilometer radius from the UMCDF common stack, and Zone 3 - locations beyond the fifty-kilometer radius. Within the CMP, Zone 1 also is to include a monitoring system to detect permitted and unpermitted releases. The CMP for Zones 1,2, and 3 shall, at a minimum, include the following elements:

1. Baseline Monitoring Program, to include;

a) A current assessment of contamination of environmental media (e.g., air, soil, surface water) and ecological endpoints that are potential receptors from pathways from the Umatilla Chemical Demilitarization Facility (UMCDF) for each of the three zones described above; and,

b) A sampling and analysis plan with appropriate Data Quality Objectives(DQO), for all three zones to assess potential impacts from the UMCDF site. The sampling and analysis plan must include the rationale for the size, number and location of sampling points, frequency of sampling, and the rationale for the parameters being monitored.

2. Perimeter Monitoring Program in Zone 1, to include;

a) A sampling and analysis plan with appropriate Data Quality Objectives(DQO) for monitoring within and at the perimeter of, Zone 1, that is capable, in a timely manner, of assessing emissions of unpermitted releases of chemical agent from the UMCDF site, and from storage igloos, and;

b) An update to the Contingency Plan to include appropriate reaction and notifications.

3. An Historical Record, to include a written reporting and file maintenance program to effectively maintain the results of the Comprehensive Monitoring Program on an annual basis.

II.A.4.ii. Within 60 days of the Department's written approval of the CMP workplan, or written approval of a Department-modified CMP workplan, the Permittee shall submit a permit modification in accordance with 40 CFR 270.42 to implement the CMP workplan. All information generated pursuant to the monitoring program shall be placed in a public repository in Hermiston following written direction from the Department.

11) *OFF-SITE WASTE PROHIBITION - PERMIT CONDITIONS*

II.B. Receipt of Off-site Waste, Processing and Shipment of Onsite Waste

1. The Permittee is not authorized to accept and therefore shall not receive hazardous waste, chemical agent, or munitions containing chemical agents from off-site.

2. The Permittee shall not send any material or waste off-site that has detectable amounts of GB, VX, or HD. Only material or wastes meeting the agent-free 3X or 5X criteria may be sent off-site.

3. The Permittee shall process, in accordance with this permit, all chemical agents, and chemical agent-contaminated materials currently stored or otherwise located at the Umatilla Chemical Depot.

12) ***PERMIT OPENER - PERMIT CONDITIONS***

I.C.4. If Congress or the President makes substantial changes in the Chemical Weapons Demilitarization program or in CSEPP, the Commission reserves the right to reopen the permit, after appropriate opportunity for the permittee and, at the discretion of the Commission, government officials and the public to be heard. If the Commission determines to reopen the permit, it may remove or modify conditions or impose additional conditions, relating to the reason for reopening the permit.

PERMIT

for the

Storage and Treatment of Hazardous Waste

State of Oregon
Department of Environmental Quality
2146 N.E. 4th St., Suite 104
Bend, Oregon 97701

Telephone: (541) 388-6146

Issued in accordance with the applicable provisions of Oregon Revised Statutes Chapter 466 and the regulations promulgated thereunder in Oregon Administrative Rules Chapter 340 Divisions 100 through 120.

ISSUED TO:

PERMITTEE:

U.S. Army Umatilla Chemical Depot
Hermiston, OR 97838-9544
Telephone: (541) 564-5200

This permit is effective as of February 12, 1997, and shall remain in effect until February 12, 2007, unless revoked and reissued (40 CFR 270.41), terminated (40 CFR 270.43), or continued in accordance with OAR 340-105-051.

ISSUED BY:

ENVIRONMENTAL QUALITY COMMISSION	DEPARTMENT OF ENVIRONMENTAL QUALITY
Henry Lorenzen	Langdon Marsh
Chair	Director
Date _____	Date _____

All federal Title 40 CFR citations are Oregon rule as adopted by OAR 340-100-002

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INTRODUCTION

Permittee: U.S. Army Umatilla Chemical Depot

Environmental Protection Agency Identification Number: OR6 213 820 917

The Permittee shall proceed expeditiously in procuring a contractor, beginning construction and commencing operation of the Umatilla Chemical Disposal Facility (UMCDF) in order to eliminate the significant risk to human health and the environment posed by the continued storage of the chemical weapons and chemical agents at the Umatilla Chemical Storage Depot.

Pursuant to Oregon Revised Statutes Chapter 466 and the hazardous waste regulations promulgated thereunder by the Oregon Environmental Quality Commission in Chapter 340 of the Oregon Administrative Rules (OAR), this permit is issued to the U.S. Army Umatilla Chemical Depot (Permittee), to operate a hazardous waste treatment and storage chemical demilitarization facility located in Umatilla County in Hermiston, Oregon, off Interstate Hwy-84 at exit 177 at latitude 45° 50' 30" and longitude 119° 26' 00". A map depicting the Umatilla Chemical Depot Site Plan as shown in FIGURE 1 on page 290 of this permit.

The Permittee must comply with all terms and conditions set forth in this permit and in Attachments 1 through 4. The Permittee must comply with all applicable state regulations, including OAR 340 Divisions 100-120, and the rules of the Public Utility Commissioner, the Workers' Compensation Department, State Health Division, and other state agencies having jurisdiction over the facility.

In some cases, within the Attachments of this permit, the Permittee has included references to exhibits or other attachments which are not physically contained in this permit. In such cases, the Permittee must still comply with the procedures of those referenced documents, even though they are not physically contained in this permit. The Permittee must maintain a set of such referenced documents at the facility.

The Permittee must maintain any documents at the facility which are referenced in any condition of this permit, even though such referenced documents may not be physically contained in the permit. The Permittee shall comply with the procedures and specifications of those referenced documents to the extent necessary to remain in compliance with the conditions of this permit.

The Permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts, or the Permittee's misrepresentation of any relevant facts at any time, shall be grounds for the termination or modification of this permit and/or initiation of an enforcement action, including criminal proceedings. The Permittee must inform the Regional Administrator of any deviation from permit conditions or changes in the information on which the application is based which would affect the Permittee's ability to comply, or actual compliance, with the applicable regulations or permit conditions or which alters any condition of this permit in any way.

The Department shall enforce all conditions of this permit. Any challenge to any permit condition, shall be appealed as directed by the Environmental Quality Commission.

This permit may later, after the effective date of this permit, be modified to incorporate permit conditions which are based on federal regulations promulgated under the Hazardous and Solid Waste Act(HSWA), but has not yet been included in the state's authorized hazardous waste program. Such a modification shall be a joint decision with the US Environmental Protection Agency (US EPA).

The US EPA shall maintain an oversight role of the state authorized program and, in such capacity, shall enforce any permit condition based on state requirements if, in the EPA's judgment, the Department should fail to enforce that permit condition, except that in no case shall the EPA enforce any permit condition which is broader in scope than the federal RCRA program. See 40 CFR 271.19.

LIST OF ACRONYMS

ACAM	Automatic Continuous Air Monitoring System
ASC	Allowable Stack Concentration
ASME	American Society of Mechanical Engineers
AWFCO	Automatic Waste Feed Cutoff
BRA	Brine Reduction Area
CAMDS	Chemical Agent Munition Disposal System(located in Utah)
CDC	Center for Disease Control
CEM	Continuous Emissions Monitor
CHB	Container Handling Building
CSDP	Chemical Stockpile Disposal Program
DAAMS	Depot Area Air Monitoring System
DFS	Deactivation Furnace System
DRE	Destruction and Removal Efficiency
DUN	Dunnage Incinerator
FFA	Federal Facilities Agreement
GFE	Government Furnished Equipment
HEPA	High Efficiency Particulate Air
HHS	Health and Human Services
HSWA	Hazardous and Solid Waste Amendment
HWMU	Hazardous Waste Management Unit
JACADS	Johnston Atoll Chemical Agent Disposal System
LIC	Liquid Incinerator
MDB	Munitions Demilitarization Building
MPF	Metal Parts Furnace
ONC	On-site Storage Container
OAR	Oregon Administrative Rules
ORS	Oregon Revised Statutes
PAS	Pollution Abatement System
PIC	Products of Incomplete Combustion
POHC	Principal Organic Hazardous Constituents
QAPs	Quality Assurance Procedures
QA/QC	Quality Assurance/Quality Control
RA	Risk Assessment
RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment
RHA	Residue Handling Area
SDS	Spent Decontamination Solution
SOP	Standard Operating Procedure
SWMU	Solid Waste Management Unit
TC	Toxicity Characteristic
TCLP	Toxicity Characteristic Leaching Procedure
TMA	Toxic Management Area
TSD	Treatment, Storage, Disposal
TWA	Time Weighted Average
UMCDF	Umatilla Chemical Disposal Facility
UMDA	Umatilla Depot Activity(former name of the Umatilla Chemical Depot)

All federal Title 40 CFR citations are Oregon rule as adopted by OAR 340-100-002

LIST OF ATTACHMENTS

The following documents are modified excerpts from the Permittee's RCRA Part B permit application. The listed documents are hereby incorporated, and made part of this permit. The Department has modified specific language in the Attachments. These incorporated Attachments are enforceable conditions of this permit, as may be modified by the specific permit conditions. Specific permit conditions (Module I through VIII), supersede the language of the Attachments if the permit condition and attachment language are found to be in conflict.

Attachment 1	Part A Application
Attachment 2	Waste Analysis Plan
Attachment 3	Inspection Schedule
Attachment 4	Contingency Procedures for Munition Drainage

MODULE I - STANDARD PERMIT CONDITIONS

I.A. EFFECT OF PERMIT

I.A.1. The Permittee is allowed to store and treat hazardous waste in accordance with the permit conditions and in accordance with 40 CFR §262. The Permittee is allowed to store hazardous waste in containers, treat and store hazardous waste in tanks, treat hazardous waste in miscellaneous treatment units, and treat hazardous waste by incineration at the Umatilla Chemical Disposal Facility (UMCDF). The Permittee is allowed to accumulate hazardous waste on-site for less than 90 days pursuant to 40 CFR §262.34 within the Umatilla Chemical Depot. The Permittee is also allowed to continue permitted storage of hazardous waste in containers in Building 203 and interim status in K-Block and J-Block igloos until final permit determinations are made and/or interim status is terminated. Any other treatment, storage, or disposal of hazardous waste not authorized in this permit, by 40 CFR §262 or any other Resource Conservation and Recovery Act (RCRA) permits is prohibited.

I.A.2 Pursuant to 40 CFR §270.4, compliance with this permit constitutes compliance, for purposes of enforcement, with the Oregon Administrative Rules (OAR)and RCRA, as amended by Hazardous and Solid Waste Amendments (HSWA), except for those requirements not included in this permit which become effective by statute, or future regulatory changes to include those requirements promulgated under 40 CFR §268 restricting the placement of hazardous wastes in or on the land. Issuance of this permit does not convey property rights of any sort nor any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of State or local law or regulations.

I.B. DEFINITIONS

All Definitions contained in 40 CFR Parts 124, 260-264, 270, and OAR 340-100-010 are hereby incorporated by reference into this permit, except that any of the definitions used below shall supersede any definition of the same term given in the regulations. Where terms are not defined in the regulations or in the permit, the meaning associated with such terms shall be the standard dictionary definition or their generally accepted scientific or industrial meaning.

For purposes of this permit, the following definitions shall apply:

"Active life"	This term shall mean the time period between permit issuance and certification of closure of the hazardous waste management site.
"Agency"	This term shall mean the U.S. Environmental Protection Agency, Region 10.
"Agent free"	This term shall mean the condition of a material that, after being analyzed for all chemical agents, is determined to have chemical agent concentrations below the lowest achievable detection limits as specified by the test methods in the Waste Analysis Plan, included as Attachment 2 of this permit, permit Module VI revised Trial Burn Plan, and permit Module V revised Performance Test Plan.

"Application"	This term shall mean the hazardous waste Part B permit application dated February 1995 and updated with change pages on March 21, 1996.
"BRA operating day"	This term shall refer to twenty four (24) hour periods initiated when the BRA began thermal operation, and for which operation occurred for any length of time for the BRA.
"Cascade Event"	This term shall be defined as when additional waste feed cutoff parameter setpoints deviate outside the limits specified in Tables 5-5, 6-3, 6-7, 6-11, 7-2, 7-4, 7-6, or 7-8 after waste feed is cutoff, but while waste or waste residues continue to be processed in the incinerator chambers, DFS-heated discharge conveyor, or BRA treatment units.
"Contamination"	This term shall mean the presence of any hazardous constituent in a concentration which exceeds the naturally occurring concentration of that constituent in the immediate vicinity of the facility.
" Corrective action"	This term shall mean all corrective measures necessary to protect human health and the environment for all releases of hazardous waste or hazardous constituents from any solid waste management unit at the facility, regardless of the time at which waste was placed in the unit. Corrective measures may address releases to air, soils, surface water, or groundwater.
"Chemical agent"	This term shall include the nerve agents VX or GB(Sarin) and the blister agent (HD).

"Chemical Stockpile Disposal Program (CSDP)"	This term shall mean the program created by the Department of Defense of which Congress enacted PL 99-195 to dispose of all of their stockpile of unitary chemical weapons.
"Daily"	As applied to a "daily" requirement at a hazardous waste unit, this term shall mean every calendar day except for those days that there is no active hazard waste management activity at that particular unit. For purposes of this definition, active waste management shall mean storage of hazardous waste in containers and tanks, and treatment of hazardous waste in incinerators and/or Subpart X unit. For "daily" requirements not dedicated to a specific unit, daily shall mean every calendar day except those days that non-critical daily requirements are not staffed due to weekends or federal holidays. For purposes of any "daily" requirement of this permit, there shall not be more than three consecutive days which the "daily" requirement can be disregarded.
"Department"	This term shall mean the Eastern Region of the Oregon Department of Environmental Quality, (with the address as specified on page one of his permit).
"DFS operating day"	This term shall refer to twenty four (24) hour periods initiated when the DFS began thermal operation, and for which operation occurred for any length of time for the DFS.

"Director"	This term shall mean the Director of the Oregon Department of Environmental Quality (DEQ) or a designated representative. For purposes of this permit, the Director's designated representative is the Eastern Regional Administrator.
"DUN operating day"	This term shall refer to twenty four (24) hour periods iniated when the DUN began thermal operation, and for which operation occurred for any length of time for the DUN.
"Extent of contamination"	This term shall mean the horizontal and vertical area in which the concentrations of hazardous constituents in the environmental media being investigated are above detection limits or background concentration indicative of the region, whichever is appropriate, as determined by the Department.
"Facility"	This term shall mean the physical description of the Umatilla Chemical Depot property (including structures, appurtenances, and improvements) under the control of the owner or operator. For the purposes of implementing corrective action, it includes all contiguous property under the control of the owner or operator.
"Government furnished equipment (GFE)"	This term shall refer to Hazardous Waste Management Unit (HWMU) equipment that will be delivered to the site as a pre-fabricated assembly.
"Hazardous waste"	This term shall mean substances that meet the definition of hazardous waste found in ORS 466.005(7), 40 CFR Part 261, and OAR 340-101.

"Hazardous constituent"	This term shall mean those substances listed in OAR 340-101 and 40 CFR Part 261 Appendix VIII and including hazardous constituents released from solid waste, hazardous waste, and hazardous waste constituents that are reaction by-products.
"Heel"	This term shall mean the amount, by weight, of residue remaining in a munition or container after the munition or container has undergone the chemical agent draining process.
"Hourly rolling average"	This term shall mean the arithmetic mean of the 60 most recent one-minute readings recorded.
"Inspector"	This term shall mean the designated representative of the "Manager" delegated routine facility oversight.
"LIC 1 operating day"	This term shall refer to twenty four (24) hour periods initiated when LIC 1 began thermal operation, and for which operation occurred for any length of time for LIC 1.
"LIC 2 operating day"	This term shall refer to twenty four (24) hour periods initiated when LIC 2 began thermal operation, and for which operation occurred for any length of time for LIC 2.
"Manager"	This term shall mean the Eastern Regional Manager of the DEQ hazardous waste program.

"MPF operating day"	This term shall refer to twenty four (24) hour periods initiated when the MPF began thermal operation, and for which operation occurred for any length of time for the MPF.
"Operating day"	This term shall refer to a twenty four (24) hour period during which operations were initiated and occurred for any length of time.
"Operating record"	This term shall mean records kept in a written format within the Umatilla Chemical Demilitarization Facility with the exception of required continuous monitoring data which may be kept in either electronic format, written format, or a combination of the two and must be immediately accessible for viewing and printing a hard copy.
"Permit"	This term shall mean the treatment portion of this permit issued by the Environmental Quality Commission, pursuant to ORS 466.055, and the storage portion of this permit issued by the Department pursuant to 466.015(c).
"Regional Administrator or Director"	In cases where the Permittee is required to comply with a specific provision of 40 CFR Part 264, it shall be interpreted to mean the Regional Administrator of the Oregon Department of Environmental Quality, Eastern Region. [See OAR 340-100(10)(y)]

"Release"	This term shall mean any spilling, leaking, pouring, emitting, emptying, discharging, injecting, escaping, leaching, pumping, or disposing into the environment of any chemical agent or hazardous waste or hazardous constituent.
"Remote computer monitoring station"	This term shall mean all necessary equipment, including terminal and all telecommunications hardware and software necessary to provide a computer monitoring station within the Department for unrestricted twenty-four (24) hour access to key UMCDF site operating data and emissions monitoring data.
"Site"	This term shall mean that it includes, but is not limited to, any permitted treatment, storage or disposal activity that may be comprised of one or more hazardous waste management units. The Umatilla Chemical Disposal Facility (UMCDF) shall be synonymous with site.
"Solid waste"	The term shall mean any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded materials, including solid, liquid, semisolid, or contained gaseous materials resulting from industrial, commercial, mining, and agriculture operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits.

"Solid Waste Management Unit" (SWMU)	This term shall mean any unit which has been used for the treatment, storage, or disposal of solid waste at any time, irrespective of whether the unit is or ever was intended for the management of solid waste management units. SWMUs include areas that have been contaminated by routine and systematic releases of hazardous waste or hazardous constituents, excluding one-time accidental spills that are immediately remediated and cannot be linked to solid waste management activities (e.g., product or process spills).
"Spent decontamination solution(SDS)"	This term shall mean caustic or bleach solutions that have been used to neutralize, or potentially neutralize, chemical agent.
"Standard Operating Procedure (SOP)"	This term shall mean a written description of the procedures by which a process, machine, etc. shall be operated. An SOP may be written by the manufacturer and/or the Army.
"Tank system"	This term shall include the tank(s) and all primary and secondary sumps, pumps, valves, and associated piping and any other appurtenances.
"Umatilla Chemical Depot (UCD)"	This term shall mean the continguous boundary of the U.S. Army Umatilla Chemical Depot that is located in Umatilla County in Hermiston, Oregon as shown in FIGURE 1 on page 290 of this permit.

"Umatilla Chemical Disposal Facility (UMCDF)"	This term shall mean the site of the Disposal Facility and its continguous fenceline boundary located on the Umatilla Chemical Depot as shown in FIGURE 1 on page 290 of this permit.
"Unit"	This term shall include but is not limited to, any landfill, surface impoundment, waste pile, land treatment unit, incinerator, injection well, tank, container storage area, septic tank, drain field, wastewater treatment unit, elementary neutralization unit, transfer station, miscellaneous treatment unit, or recycling unit.
"Weight of Batch Processed"	This term shall mean initial weight of brine in surge tank, minus weight of tank/heel sludge left in brine surge tank.

I.C. PERMIT ACTIONS

I.C.1. This permit may be modified, revoked and reissued, or terminated for cause as specified in 40 CFR §§270.41, 270.42, 270.43, and OAR 340 Divisions 105 and 106. The filing of a request for a permit modification, revocation and reissuance, or termination or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any permit condition except as provided in 40 CFR §§270.41, 270.42, 270.43, and OAR Divisions 105 and 106.

I.C.2. In accordance with ORS 466.170, the Commission may revoke this permit after public hearing upon a finding that the Permittee has violated any provision of ORS 466.005 to 466.385 and 466.890 or rules adopted pursuant thereto or any material condition of the permit, subject to review under ORS 183.310 to 183.550.

I.C.3. In accordance with ORS 466.200, if the Department or Commission finds that there is reasonable cause to believe that a clear and immediate danger to the public health, welfare or safety or to the environment exists from the continued operation of the site, the Department may halt demilitarization operations at the UMCDF. Non-compliance with the Department's written notification shall be a violation of this permit condition. Resumption of operations shall be initiated only upon written approval of the Department.

I.C.4. **RE-OPENER**

If Congress or the President makes substantial changes in the Chemical Weapons Demilitarization program or in CSEPP, the Commission reserves the right to reopen the permit, after appropriate opportunity for the permittee and, at the discretion of the Commission, government officials and the public to be heard. If the Commission determines to reopen the permit, it may remove or modify conditions or impose additional conditions, relating to the reason for reopening the permit.

I.D. SEVERABILITY

The provisions of this permit are severable and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby. Invalidation of any State of Oregon or federal statutory or regulatory provision which forms the basis for any permit condition does not affect the validity of any other State of Oregon statutory or regulatory basis for said condition. [40 CFR §124.16(a)]

I.E. DUTY TO COMPLY

The Permittee must comply with all permit conditions except to the extent and for the duration such noncompliance is authorized by an emergency permit (issued under 40 CFR §270.61). Any permit noncompliance, other than noncompliance authorized by an emergency permit constitutes a violation of the applicable provision of Oregon state law, and is grounds for enforcement action, permit termination, modification or revocation and reissuance of the permit or denial of a permit renewal application. [40 CFR §270.30(a)]

I.F. DUTY TO REAPPLY

If the Permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Permittee must apply for and obtain a new permit, in accordance with 40 CFR §270.30(b). The Permittee shall submit such permit application at least 180 days prior to the expiration date of this permit, in accordance with 40 CFR §270.10(h).

I.G. PERMIT EXPIRATION

This permit and all conditions therein shall be effective for ten years from the effective date of this permit. [40 CFR §270.50(c)]

Total operating time for the UMCDF site shall be no more than 36000 hours, with no more than 6000 operational hours for each incinerator and no more than 6000 operational hours for the brine reduction area in any consecutive twelve month period.

I.H. CONTINUATION OF EXPIRING PERMIT

This permit and all conditions herein shall continue in force until the effective date of a new permit, if the Permittee has submitted a timely, complete application (under 40 CFR §270 Subpart B and OAR Chapter 340 Division 105), and through no fault of the Permittee, the Department has neither issued nor denied a new permit on or before the expiration date of this permit. [40 CFR §270.51 and OAR 340-105-051]

I.I. OBLIGATION FOR CORRECTIVE ACTION

Owners or operators of hazardous waste management units must have all necessary permits during the active life (and the closure periods) of the unit, and for any period necessary to comply with the corrective action requirements (see Module III) of this permit. The corrective action obligations required by this permit will continue regardless of whether the facility continues to operate or ceases operation and closes. The facility is obligated to complete facility-wide corrective action regardless of the operational status of the facility.

I.J. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the permit conditions. [40 CFR §270.30(c)]

I.K. DUTY TO MITIGATE

In the event of noncompliance with the permit, the Permittee shall take all reasonable steps to minimize releases to the environment resulting from the noncompliance, and shall carry out such measures as are reasonable, to prevent significant adverse impacts on human health or the environment. [40 CFR §270.30(d)]

I.L. PROPER OPERATION AND MAINTENANCE

I.L.1. The Permittee shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the permit conditions. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures (QAPs) to include following standard operating procedures (SOPs) and training procedures. SOPs will be at a minimum reviewed and updated as needed. This provision requires the operation of back-up or auxiliary equipment or similar systems only when necessary to achieve compliance with the permit conditions. [40 CFR §270.30(e)]

I.L.2. In accordance with ORS 466.180(1), the Department or Commission may limit, prohibit, or otherwise restrict storage and treatment operations at the UMCDF upon receipt of information that indicates non-compliance with permit condition I.L.1. The Department shall invoke such restrictions by written notification that specifies actions that the Permittee must take to comply. Non-compliance with the Department's written notification shall be a violation of this permit condition.

I.M. DUTY TO PROVIDE INFORMATION

The Permittee shall furnish to the Department, within a reasonable time, any relevant information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit. [40 CFR §270.30(h)]

I.N. INSPECTION AND ENTRY

Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow the employees of the Department or their authorized representative to [40 CFR §270.30(i)]:

i. Enter at reasonable times the Permittee's premises where the regulated facility or activity is located or conducted; or where records must be kept under the permit conditions;

ii. Have access to and copy, at reasonable times, any records that must be kept under the permit conditions;

iii. Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

iv. Sample or monitor any substances at reasonable times for the purpose of assuring permit compliance or as otherwise authorized by RCRA or state law, any substances or parameters at any location.

v. The Permittee shall provide all the necessary equipment to the Department for the installation and maintenance of a compatible remote computer monitoring station, including terminal and all telecommunications hardware and software necessary to provide the Department, at a location acceptable to the Department, unrestricted twenty-four (24) hour access to key UMCDF site operating data and emissions monitoring data. The necessary equipment must be operational before any shakedown thermal operations may begin.

I.O. MONITORING AND RECORDS

I.O.1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The methods used to obtain representative samples of the wastes to be analyzed must be the appropriate method from Appendix I of 40 CFR Part 261 or the methods as specified in the Waste Analysis Plan included as Attachment 2 of this permit. Laboratory methods must be those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods (SW-846, latest edition), Methods for Chemical Analysis of Water and Wastes (EPA-600/4-79-020), or the methods as specified in the attached Waste Analysis Plan included as Attachment 2 of this permit. [40 CFR §270.30(j)]

All methods used to obtain representative samples of the wastes to be analyzed pursuant to this permit shall be reviewed and approved by the Department in accordance with 40 CFR §270.42 unless otherwise specified in this permit. (see permit condition I.O.5)

I.O.2. The Permittee shall retain records at the Facility of all monitoring information, including all calibration and maintenance records, copies of all reports and records required by this permit, and records of all data used to complete the application for this permit for a period of at least (3) years from the date of the sample, measurement, report or record or for periods elsewhere specified in this permit. The Permittee shall retain, at the Facility, all monitoring records from all surface water sampling, seep sampling, soil sampling, sediment sampling, groundwater monitoring wells, and associated groundwater surface elevations until three (3) years past the end of corrective action instituted to address releases of hazardous waste or hazardous waste constituents from any solid waste management unit. These periods may be extended by the request of the Department at any time and are automatically extended during the course of any unresolved enforcement action regarding this Facility. [40 CFR §264.74(b) and 270.30(j)(2)]

I.O.3. Records of monitoring information shall include [40 CFR §270.30(j)(3)]:

i. The date, exact place, and time of sampling or measurement;

ii. The individual(s) who performed the sampling or measurements;

iii. The date(s) analyses were performed;

iv. The individual(s) who performed the analyses;

v. The analytical techniques or methods used; and

vi. The results of such analyses.

I.O.4. The Permittee shall submit all monitoring results at the intervals specified elsewhere in this permit.

I.O.5. The Permittee may substitute analytical methods which are equivalent to those specifically approved for use in this permit in accordance with the following:

i. The Permittee submits to the Manager a request for substitution of an analytical method(s) which is equivalent to the method(s) specifically approved for use in this permit. The request shall provide information demonstrating that the proposed method(s) is equal or superior to the approved analytical method(s)in terms of sensitivity, accuracy, and precision (i.e., reproducibility); and

ii. The Manager notifies the Permittee in writing, that the substitution of the analytical method(s) is approved. Such approval shall not require a permit modification.

I.P. REPORTING PLANNED CHANGES

As soon as possible, prior to any planned physical alteration or addition, the Permittee shall give notice to the Department of such planned physical alterations or additions to the areas at the UMCDF. [40 CFR 270.30(1)(1)]

I.Q. REPORTING ANTICIPATED NONCOMPLIANCE

The Permittee shall give advance notice to the Department of any planned changes or activities at the UMCDF which may result in noncompliance with permit requirements. Advanced notice shall not constitute a defense for any noncompliance. [40 CFR §270.30(l)(2)]

I.R. CERTIFICATION OF CONSTRUCTION OR MODIFICATION

I.R.1. Except for less than 90 day accumulation pursuant to 40 CFR 262.34, the Permittee may not commence storage or treatment of hazardous waste in any new unit, including Government Furnished Equipment (GFE), at the UMCDF until the Permittee has submitted to the Department, by certified mail or hand delivery, a certification of construction signed by the Permittee and an independent, registered professional engineer stating that the unit has been constructed in compliance with the permit and applicable regulations; and

i. The Department has inspected the modified or newly constructed unit or facility and finds it is in compliance with the conditions of the permit; or

ii. The Department has either waived the inspection or has not within 15 days notified the Permittee of its intent to inspect. [40 CFR §270.30(1)(2)]

I.R.2. The above mentioned certification of construction must include at a minimum:

i. As built drawings;

ii. Descriptions and delineation of any changes to proposed drawings;

iii. All required professional certifications;

iv. All quality assurance/quality control documentation (QA/QC); and

v. All required physical testing results.

I.R.3. Construction certification shall be provided for the following UMCDF site hazardous waste management systems and units:

Brine Storage Tank System
Spent Decontamination Holding Tank System
Agent Collection Tank System
Liquid Incinerators and Pollution Abatement System
Metal Parts Furnace and Pollution Abatement System
Deactivation Furnace and Pollution Abatement System
Dunnage Incinerator and Pollution Abatement System
Brine Reduction Area Subpart X Units and Pollution Abatement System (including Drum Dryers, Flash Evaporators and Heat Exchangers)
Container Handling Building
Demilitarization Machines Systems
HVAC System (including carbon filter systems)
Pollution Abatement System Carbon Filters

I.S. TRANSFER OF PERMIT

This permit shall be issued or transferred to a new owner or operator only if it is modified or revoked and reissued pursuant to OAR 340-105-040. Prior to transferring to any person, the UMCDF permit, the Permittee shall notify the new owner or operator, in writing, of the requirements of 40 CFR Parts 264 and 270, OAR Chapter 340, and this permit. [40 CFR 270.30(1)(3)]

I.T. COMPLIANCE SCHEDULES

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than fourteen (14) days following each schedule date. [40 CFR §270.33]

I.U. TWENTY-FOUR HOUR REPORTING

I.U.1. The Permittee shall immediately report to the Regional Administrator any noncompliance which may endanger human health or the environment as soon as the Permittee becomes aware of the circumstances. Any such information shall be reported as soon as possible, and may be made verbally or written notification by telefax. [OAR 340-105-030]

I.U.1.i. Potential endangerment to human health and the environment shall include, but not be limited to, noncompliance with permit condition II.A.1.

I.U.1.ii. Potential endangerment to human health or the environment shall include, but not be limited to, any release to the environment of any chemical agent (i.e., GB, VX, and HD) or any chemical agent residue which results in the following:

a. Any release to the atmosphere from the stack for the Dunnage Incinerator, the combined stack for the Liquid Incinerators, the Deactivation Furnace, and the Metal Parts Furnace, the stack for the Brine Reduction Area, or from any stack for the air filtration system if the confirmed stack emission levels exceed the maximum allowable stack concentrations identified for any individual chemical agent in Table 1-1 of this permit.

b. Chemical agent concentrations, at the Facility boundary or at any of the Facility monitoring perimeter stations, exceeding the General Population Limits specified in Table 1-1 of this permit for each chemical agent.

c. Any unprotected workers exposed to chemical agent concentrations, exceeding the TWA specified in Table 1-1 of this permit as measured by any chemical agent monitor (i.e., Automatic Continuous Air Monitoring System (ACAMS)/Depot Area Air Monitoring System (DAAMS)) within the UMCDF site.

d. Chemical agent concentrations, within the facility boundary, but outside the MDB, exceeding the TWA specified in Table 1-1 of this permit, as measured by any chemical agent monitor.

I.U.1.iii. Potential endangerment to human health or the environment shall include any non-confirmed indication that a release to the atmosphere under permit conditions I.U.1.ii.a, I.U.1.ii.b, and I.U.1.ii.d has occurred. The Permittee shall verbally report to the Department within four hours of when a chemical agent monitor detects a non-confirmed emission level that indicates a release to the atmosphere, if the emission levels have not been verified as a chemical agent monitor anomaly (i.e., false positive) within that same four hours.

I.U.2. In accordance with 40 CFR §270.30(1)(6)(i)(A) and (B), the immediate and twenty-four (24) hour verbal report required in permit condition I.U.1. shall include, but not be limited to, the following:

i. Information concerning the release of any hazardous waste which may endanger public drinking water supplies;

ii. Any information of a release or discharge of hazardous waste, or of a fire or explosion at the UMCDF, which could threaten the environment or human health; and

iii. A description of the release or discharge and its cause including at a minimum:

a. Name, title, and telephone number of individual reporting;

b. Name, address, and telephone number of the owner or operator;

c. Name, address, and telephone number of the UMCDF;

d. Date, time, and type of incident;

e. Location and cause of incident;

f. Name and quantity of materials involved;

g. The extent of injuries, if any;

h. An assessment of actual or potential hazard to the environment and human health, where this is applicable;

i. Description of any emergency action taken to minimize the threat to human health and the environment;

j. Estimated quantity and disposition of recovered material that resulted from the incident; and

k. Any other information necessary to fully evaluate the situation and to develop an appropriate course of action.

I.U.3. Within five (5) calendar days of the time the Permittee is required to provide verbal notification, as specified in permit conditions I.U.1. through I.U.2., the Permittee shall provide to the Department a written submission in accordance with 40 CFR §270.30(1)(6).

I.U.3.i. The written submission shall include, but not be limited to the following:

a. Name, address, and telephone number of the individual reporting;

b. A description (include cause, location, extent of injuries, if any, and an assessment of actual or potential hazard to the environment and human health outside the UMCDF, where this is applicable) of the incident (noncompliance and/or release);

c. The period(s) in which the incident (noncompliance and/or release) occurred (including exact dates and times);

d. Whether the results of the incident remain a threat to human health and the environment (whether the noncompliance has been corrected and/or the release has been adequately cleaned up); and

e. If not, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and/or the steps taken or planned to adequately clean up the release.

I.U.3.ii. The Permittee need not comply with the five (5) calendar day written notice requirement if the Department waives the requirement and the Permittee submits a written report within fifteen (15) calendar days from the time the Permittee is required to provide verbal notification, as specified in permit conditions I.U.1. through I.U.2.

I.V. OTHER NONCOMPLIANCE

The Permittee shall report to the Manager or the Administrator all other instances of noncompliances not reported under Permit Conditions I.Q., I.R., I.S., I.T., and I.U. at the time monitoring reports are submitted. The reports shall contain the information required by 40 CFR §270.30(1)(10).

I.W. OTHER INFORMATION

If the Permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application, permit modification request, or in any report to the Department, such facts or information shall be promptly submitted by the Permittee [40 CFR § 270.30(1)(11)]. In addition, upon request, the Permittee shall furnish to the Department any information related to compliance with the permit. The Permittee shall also promptly provide the Department all incident reports generated at any other Chemical Stockpile Disposal Program (CSDP) Facility within ten (10) days of the incident being reported to the Program Manager for the Umatilla Chemical Demilitarization Facility. For purposes of this permit, the verbal or written reporting of an incident shall include demilitarization events that are outside the scope of this permit.

I.X. SIGNATORY REQUIREMENT

All applications, reports or information required by this permit, or otherwise submitted to the Department, shall be signed and certified by the Umatilla Chemical Depot Commander, or by a duly authorized representative of that person in accordance with 40 CFR §270.11.

I.Y. CONFIDENTIAL INFORMATION

Any information submitted by the Permittee to the Administrator or to the Director, Manager, or Inspector may be claimed as confidential by the Permittee in accordance with the applicable provisions of OAR 340-100-003.

I.Z. REPORTS, NOTIFICATIONS, AND SUBMISSIONS

I.Z.1. All reports, notifications, or other submissions which are required by this permit to be sent or given to the Department should be sent by certified mail, express mail, or hand delivered to:

Regional Administrator
Oregon Department of Environment Quality
2146 N.E. 4th St., Suite 104
Bend, Oregon 97701

Phone: (541) 388-6146
FAX: (541) 388-8283

I.AA. DOCUMENTS TO BE MAINTAINED AT THE UMCDF

The Permittee shall maintain at the Facility, until closure is completed and certified by an independent, registered professional engineer, the following documents and amendments, revisions and modifications to these documents:

i. Waste Analysis Plan (Attachment 2 of this permit), as required by 40 CFR §264.13 and this permit.

ii. Inspection schedules and logs (Attachment 3 of this permit), as required by 40 CFR §264.15(b)(2) and this permit.

iii. Personnel training documents and records, as required by 40 CFR §264.16(d) and this permit.

iv. Contingency Plan (Volume X, Section G of the Application), as required by 40 CFR §264.53(a) and this permit.

v. Operating record, as required by 40 CFR §264.73 and this permit.

vi. Closure Plan, as required by 40 CFR §264.112(a) and this permit.

vii. Copy of this permit, permit attachments, current permit application and the current permit application attachments.

viii. Construction certification and as built drawings for the UMCDF Site Hazardous Waste Management Units identified under I.R.3.

ix. Independent tank system assessment, installation, and repair certifications; as required by 40 CFR §264.192(g).

I.BB. PERMIT CONDITIONS AND ATTACHMENTS

If any of the attachments to this permit are found to conflict with any of the permit conditions in Modules I through VIII of this permit, the conditions will take precedence.

If any section of the application is found to be in conflict with any condition in this permit, the condition will take precedence.

If any section of the application is found to be in conflict with any Attachment to this permit, the attachment to this permit will take precedence.

TABLE 1.1 CHEMICAL AGENT EXPOSURE LIMITS AND CHEMICAL AGENT STACK LIMITS

CHEMICAL AGENT CONCENTRATIONS (mg/m^3)			
Location	VX	GB	HD
Maximum Allowable Instantaneous Stack Concentration[1,2]	0.0003	0.0003	0.03
General Population Limit[1,3] (Averaging Time: 72 hours)	0.000003	0.000003	0.0001
Work-place Time Weighted Average[1,3] (Averaging Time 8 Hours)	0.00001	0.0001	0.003

[1] Public Law 91-121/441 (USC 1512) mandates that the United States Department of Health and Human Services (HHS) review the plans for transporting and/or disposing of lethal chemical agents and make recommendations for protecting human health and safety. HHS delegated review and recommendation authority to the Centers for Disease Control (CDC).

[2] The Department of Army proposed the maximum allowable stack concentrations indicated in Table 1-1. HHS reviewed the concentrations and announced in the March 15, 1988 Federal Register (53 FR 8504) [corrected in 53 FR 11002, April 4, 1988] that the concentrations "met HHS criteria and appear to be more restrictive than limits set on a health base alone," and therefore made no recommendation changes.

[3] The March 15, 1988 Federal Register (53 FR 8504) [corrected in 53 FR 11002, April 4, 1988], announced that CDC concluded that the concentrations indicated in Table 1-1 will adequately protect human health; "even long-term exposure to these concentrations would not create any adverse health effects."

NOTE: CDC determined that the current available data precluded acceptable exposure limits for mustard agent being precisely defined. CDC concluded that the work-place limits will amply protect a general population 1000 meters or more from the demilitarization site or transportation route. Therefore, protection of the general public is dependent upon meeting the work-place limits within the facility.

MODULE II - GENERAL FACILITY CONDITIONS

II.A. DESIGN AND OPERATION OF FACILITY

II.A.1. The Permittee shall design, construct, maintain, and operate the permitted sites at the UMCDF to minimize the possibility of a fire, explosion, or any unplanned sudden or nonsudden release of hazardous waste or hazardous waste constituents to air, soil, groundwater, or surface water which could threaten human health or the environment.

II.A.2. The Permittee shall construct all hazardous waste management units in accordance with the approved designs and specifications that are included in the Application, except for minor changes deemed necessary by the Permittee to facilitate proper construction of the hazardous waste management units. Minor deviations from the approved designs or specifications necessary to accommodate proper construction shall be noted on the as-built drawings and the rationale for those deviations shall be provided in written narrative form to the Department. After completion of construction of each hazardous waste management unit, the Permittee shall submit final as-built drawings and the narrative report to the Department as part of the construction certification documentation specified in Condition I.R. of this permit.

II.A.3. The Permittee shall submit to the Department a request for a Class 2 permit modification, within 180 days of the effective date of this permit, identifying the standard operating procedures that will be followed by Umatilla Chemical Depot and UMCDF personnel for handling and transporting munitions from the storage igloos to the UMCDF site, and for hazardous waste treatment, during inclement weather or adverse wind conditions. The Standard Operating Procedures must include a description of the weather conditions, in addition to the procedures that are to be followed by UCD and UMCDF personnel.

II.A.4. Comprehensive Monitoring

II.A.4.i. Within 180 days of the effective date of the permit, the Permittee shall submit for Department review and approval a Comprehensive Monitoring Program (CMP) workplan to implement a program that will confirm results of the Pre-Trial-Burn and Post-Trial-Burn Risk Assessments for each of the areas described: Zone 1 - the Umatilla Chemical Demilitarization Facility to the Umatilla Chemical Depot fenceline, Zone 2 - the Umatilla Chemical Depot fenceline out to a fifty-kilometer radius from the UMCDF common stack, and Zone 3 - locations beyond the fifty-kilometer radius. Within the CMP, Zone 1 also is to include a monitoring system to detect permitted and unpermitted releases. The CMP for Zones 1,2, and 3 shall, at a minimum, include the following elements:

1. Baseline Monitoring Program, to include;

   a. A current assessment of contamination of environmental media (e.g., air, soil, surface water) and ecological endpoints that are potential receptors from pathways from the Umatilla Chemical Demilitarization Facility (UMCDF) for each of the three zones described above; and,

   b. A sampling and analysis plan with appropriate Data Quality Objectives(DQO), for all three zones to assess potential impacts from the UMCDF site. The sampling and analysis plan must include the rationale for the size, number and location of sampling points, frequency of sampling, and the rationale for the parameters being monitored.

2. Perimeter Monitoring Program in Zone 1, to include;

   a. A sampling and analysis plan with appropriate Data Quality Objectives(DQO) for monitoring within and at the perimeter of, Zone 1, that is capable, in a timely manner, of assessing emissions of unpermitted releases of chemical agent from the UMCDF site, and from storage igloos, and;

   b. An update to the Contingency Plan to include appropriate reaction and notifications.

3. An Historical Record, to include a written reporting and file maintenance program to effectively maintain the results of the Comprehensive Monitoring Program on an annual basis.

II.A.4.ii. Within 60 days of the Department's written approval of the CMP workplan, or written approval of a Department-modified CMP workplan, the Permittee shall submit a permit modification in accordance with 40 CFR 270.42 to implement the CMP workplan. All information generated pursuant to the monitoring program shall be placed in a public repository in Hermiston following written direction from the Department.

II.B. RECEIPT OF OFF-SITE WASTE AND SHIPMENT OF ONSITE WASTE

II.B.1. The Permittee is not authorized to accept and therefore shall not receive hazardous waste, chemical agent, or munitions containing chemical agents from off-site.

II.B.2. The Permittee shall not send any material or waste off-site that has detectable amounts of GB, VX, or HD. Only material or wastes meeting the agent-free 3X or 5X criteria may be sent off-site.

II.B.3. The Permittee shall process, in accordance with this permit, all chemical agents, and chemical agent-contaminated materials currently stored or otherwise located at the Umatilla Chemical Depot.

II.C. GENERAL WASTE ANALYSIS

II.C.1. The Permittee shall comply with all requirements in accordance with 40 CFR §264.13 and shall follow the procedures described in the Waste Analysis Plan, included as Attachment 2 of this permit.

II.C.2. The Permittee may not accept an unidentified waste for storage or treatment until it has been completely characterized.

II.C.3. The Permittee shall utilize the methods of the Waste Analysis Plan, in Attachment 2 of this permit, for the analysis of any of the wastes listed in the Part A Application, in Attachment 1 of this permit.

II.C.4. The Permittee shall verify that the metal scrap generated from the operation of the DFS, DUN, and MPF (subjected to 1000°F for at least 15 minutes) is agent free, either through testing at the Tooele Chemical Agent Disposal Facility (TOCDF), Chemical Agent/Munition Disposal System (CAMDS), the Department of Army's Johnson Atoll Chemical Agent Disposal System (JACADS), or at the UMCDF site. Until verification results are accepted as valid by the Department and the requirements of 40 CFR §261.6 (a)(3)iii are met, the metal scrap shall be managed as hazardous waste. The Department shall notify the Permittee in writing that the verification results have been accepted as valid.

II.C.5. The Permittee shall submit an updated Waste Analysis Plan as a permit modification, in accordance with 40 CFR §270.42, to address agent purity/ waste characterization database within three hundred sixty (360) days of the effective date of this permit condition.

II.D. SECURITY PROCEDURES

II.D.1. The Permittee shall comply with the Security Procedures set forth under 40 CFR §264.14(b)and(c) and as described in Volume IX, Section F-1 of the Application. The map of the UMCDF site depicting the location of fencing and gates for the UMCDF site and the entire UCD Facility is located in Volume I, Section B Figures B-2-2 and B-4-1 of the Application.

II.E. GENERAL INSPECTION REQUIREMENTS

II.E.1. The Permittee shall comply with all requirements under 40 CFR §264.15 (a)and(b)(1)and follow the Inspection Procedures and Schedules included as Attachment 3 of this permit.

II.E.2. The Permittee shall remedy any deterioration or malfunction (of equipment or structures) discovered during an inspection as required by 40 CFR §264.15(c).

II.E.3. The Permittee shall record all inspection reports in the operating record for each permitted hazardous waste management site as required by 40 CFR §264.15(d).

II.E.4. The permittee may make only the following changes to the inspection plan without first obtaining a permit modification:

i. Upon certification of closure of an individual waste management unit, any portion of the Inspection Plan specific to the operation of that unit may be deleted from the Inspection Plan, Attachment 3 of this permit.

ii. The Permittee may add inspection parameters to an existing inspection form, table, or figure in cases where such additional parameters will result in a more comprehensive or detailed Inspection Plan.

iii. The Permittee may create additional inspection forms, tables, or figures to address inspection parameters for equivalent or superior replacement equipment which must be routinely inspected.

II.E.5. The Permittee shall submit, within 180 calendar days of the effective date of this permit, a written program that describes the independent oversight process for the demilitarization construction activities, health and safety operations, and chemical agent process/handling operations at the UMCDF site. All reports generated by the oversight activities described in this report and reports of independent investigations shall be made available to the Department within 15 days of report finalization, in order for the Director of the Department to attest to the effectiveness of the independent oversight program. With written direction from the Department, the Permittee shall place such inspection reports in a public repository in Hermiston, Oregon. In the case of special independent investigations caused by unique and non-routine incidents, the Permittee shall notify the Department of the initiation of the investigation within 24 hours of the time the Permittee becomes aware of the investigations. Upon request by the Department or Commission, the permittee shall provide an updated report describing the independent oversight program that incorporates all appropriate additions and changes in response to any deficiencies or requested changes. An independent oversight review shall be conducted on a periodic basis and when specifically requested by the Department or Commission. If the Commission is not satisfied with the independent oversight program or the results of the independent investigations, the Commission may issue an order to halt immediately all operations.

II.F. TRAINING PLAN

II.F.1. The Permittee shall ensure that all personnel who handle hazardous waste are trained in hazardous waste management, safety procedures and emergency procedures, as applicable to their job description in accordance with 40 CFR §264.16 and by following the outlines and procedures in Volume XII, Section H of the Application.

II.G. PREPAREDNESS AND PREVENTION

II.G.1. The Permittee shall follow the preparedness and prevention procedures in Volume IX, Section F and Volume II, Sections D-1a, D-1f, D-1g, D-1j, and D-2 of the Application and Table D-1-13 located in Volume II, Section D-1 of the Application.

II.G.2. The Permittee shall operate and perform preventative maintenance, inspections and repair of the equipment listed in Table 2-1, at a minimum, in accordance with manufacturer's specifications. The Permittee shall maintain records of inspections, preventative maintenance and repair activities on this equipment with schedules, (reflecting minimum and planned frequency for the performance of these preventative maintenance activities) in the operating record of each permitted hazardous waste management unit in accordance with Condition I.O. of this permit.

II.H. CONTINGENCY PLAN

II.H.1. The Permittee shall follow the procedures and schedules outlined in the Contingency Plan, in Volume X, Section G of the Application.

i. The Permittee shall maintain on file the latest UCD Chemical Accident/ Incident Response and Assistance Plan (CAIRA) at the UCD Emergency Operations center (EOC) and submit the latest updated CAIRA Plan to the Department at the regional office in Bend and one copy to each of the field offices in Hermiston and Pendleton. Upon review of the latest updated CAIRA Plan, if deemed necessary, the Department may ask the Permittee to submit a permit modification in accordance with 40 CFR §270.42.

II.H.2. If chemical agent is detected by the UMCDF site perimeter monitors above the General Population Limits in Table 1-1 of this permit, the Permittee shall, in addition to implementing the Contingency Plan, in Volume X, Section G of the Application, perform a staged shutdown of all incineration operations at the UMCDF site including waste feed cut offs, in accordance with the procedures specified in Volume II, Section D-5 through D-9 of the Application.

II.H.3. The Permittee shall not reinstate process operations after shutdown under either Condition II.H.2. of this permit or shutdown as a result of a major explosion, as designated in Volumes X through XI, Section G of the Application, unless the following has occurred:

II.H.3.i. The Permittee has submitted a request to resume operations to the Department accompanied by the following information:

a. Detailed description of the accident/incident;

b. The cause of the accident as determined by the results of the investigation of the accident;

c. The corrective action(s) taken;

d. A copy of the notification received by the Permittee from the Program Manager for Chemical Demilitarization that operations are authorized to resume.

II.H.3.ii. The Department has provided the Permittee a written approval to resume operations.

II.H.4. CSEPP Readiness

The Permittee shall submit within 150 days of the effective date of the permit and every 180 days thereafter until all agent at the Depot has been destroyed; a written progress report to the Department on the status of the Chemical Stockpile Emergency Preparedness Program (CSEPP). The report shall evaluate CSEPP's readiness for responding to an incident at the Umatilla Chemical Depot and should address at a minimum, status of community emergency sirens and distribution of tone alert radios of the Alert Notification System (ANS); the ability to provide off-site chemical agent monitoring and decontamination during an incident, off-site triage and treatment of casualties; and, the state of enhanced sheltering and positive pressurization of buildings, such as schools and hospitals, where substantial numbers of persons can be expected to gather daily. [40 CFR 270.32(b)(2)]

II.H.4.i. The Permittee shall not commence any thermal shakedown, trial burn, or post-trial burn activity, as defined in Module VI, until the Department has notified the Permittee in writing that it has received written notification from the Governor of the State of Oregon, or his designee, that an adequate emergency response program is in place and fully operational for protecting the general population (Chemical Stockpile Emergency Preparedness Program [CSEPP]). The written determination of the Governor (or his designee) shall be placed in the administrative record. [40 CFR 270.32(b)(2)]

II.H.5. EOC POSITIVE PRESSURE

For the UCD Emergency Operations Center (EOC) that gathers or disseminates information used to respond to off-Depot releases, the Permittee shall have a positive-pressurized Emergency Operations Center (EOC) that is adequately staffed 24 hours a day, 7 days a week. For this permit condition, "positive-pressurized" shall mean that ambient non-air vapors can not enter during times of emergency training, in the event of an actual emergency, or when tested on request by a Department inspector. The EOC must be pressurized within 300 days of the effective date of this permit, and the EOC is to comply with the staffing requirement within 90 days of the effective date of this permit.

II.I. RECORDKEEPING AND REPORTING

II.I.1. In addition to the recordkeeping and reporting requirements specified elsewhere in this permit, the Permittee shall comply with the following:

i. The Permittee shall maintain a written or electronic operating record at the UMCDF, in accordance with 40 CFR §264.73(a) for all records identified in 40 CFR §264.73(b)(1) through (b)(5), (b)(9), (b)(12), and (b)(16).

ii. The Permittee shall, by March 31 of each year, submit to the Department a certification pursuant to 40 CFR §264.73(a), signed in accordance with 40 CFR §264.73 (b)(9), that the Permittee has a program in place to reduce the volume and toxicity of hazardous waste generated to the degree determined by the Permittee to be economically practicable; and the proposed method of treatment, storage, or disposal is the most practicable method currently available to the Permittee which minimizes the present and future threat to human health and the environment.

iii. The Permittee shall submit a annual report covering the activities of each permitted hazardous waste management unit to the Department in accordance with OAR 340-102-041 and OAR 340-104-075.

iv. The Permittee shall submit to the Department any additional reports specified in accordance with 40 CFR §264.77.

v. All reports, notifications, applications, or other materials required to be submitted to the Department shall be submitted at the address shown in Condition I.Z.1. of this permit.

II.J. CLOSURE

II.J.1. The Permittee shall amend the Closure Plan, included in Volume XII, Section I of the Application, in accordance with 40 CFR §264.112(c) and submit it to the Department for review and approval at least 180 calendar days prior to the date scheduled for commencing closure, or, whenever the Permittee finds it necessary to revise the Closure Plan. The amended Closure Plan must address, but not be limited to, sampling and closure procedures of surrounding soils that air dispersion modeling indicates potential deposition resulting in levels of hazardous constituents above background. Such amendment for the Closure Plan must be made in accordance with 40 CFR 270.42 or II.Q.

II.J.2. The Permittee shall not commence closure of any hazardous waste management unit without first receiving approval of the Closure Plan for that unit from the Department.

II.J.3. Within ninety (90) calendar days of the Permittee's receipt of the written approval from the Department for any hazardous waste management unit's Closure Plan, the Permittee shall close the hazardous waste management unit in accordance with the approved plans.

II.J.4. The Permittee shall decontaminate or dispose of all UMCDF site equipment as specified in the Closure Plan included in Volume XII, Section I of the Application.

II.J.5. The Permittee shall meet the general closure performance standard as specified in 40 CFR §264.111 during closure of all hazardous waste management units at the UMCDF. Compliance with 40 CFR §264.111 shall require closure of each hazardous waste management unit in accordance with Condition II.J. and the Closure Plan, included in Volume XII, Section I of the Application.

II.J.6. The Permittee shall provide certification statements upon completion of closure for each hazardous waste management unit when that hazardous waste management unit at the UMCDF has been closed in accordance with the applicable specifications in the Closure Plan, as required by 40 CFR §264.115.

II.J.7. For all hazardous waste management units, minor deviations from the permitted closure procedures necessary to accommodate proper closure shall be described in a narrative form with the closure certification statements. The Permittee shall describe the rationale for implementing minor changes as part of this narrative report. Within sixty (60) calendar days after completion of closure of each hazardous waste management unit the Permittee shall submit the certification statements and narrative report to the Department.

II.J.8. In the event that any hazardous waste management unit cannot be clean closed by removing hazardous waste, hazardous waste constituents, contaminated subsoil, and any contaminated groundwater as specified in the Closure Plan, the Permittee shall submit the modified closure and post-closure plan for that hazardous waste management unit to the Department, as a permit modification request in accordance with 40 CFR §270.42 within thirty (30) calendar days of the date that the Department notifies the Permittee in writing that the unit shall be closed as a landfill, in accordance with 40 CFR §264.118(a).

II.J.9. Following submittal of all successful closure decontamination certifications in accordance with permit condition II.J.6., the Permittee shall dismantle, remove, and properly manage the disposal of the Munition Demilitarization Building (MDB) to an approved disposal facility. All other structures (e.g., buildings, parking areas, underground structures, fences, etc.,) within the boundary of the UMCDF shall also be properly managed and removed to a disposal facility. All areas where structures have been removed shall be reclaimed. If the Umatilla Chemical Depot - Local Reuse Authority (UCD-LRA) identifies a use for any of the structures, except the MDB, the Permittee may request a modification to this permit condition as a class 2 modification in accordance with 40 CFR §270.42(b) and 40 CFR §270.32(b)(2) to accommodate such use.

II.K. FINANCIAL ASSURANCE FOR FACILITY CLOSURE

The Permittee is exempt from the closure financial assurance requirements, as specified in 40 CFR §264.143.

II.L. COST ESTIMATE FOR FACILITY CLOSURE

The Permittee is exempt from the cost estimate requirements in accordance with 40 CFR § 264.140(c).

II.M. LIABILITY REQUIREMENTS

The Permittee must provide the liability coverage for sudden-and-accidental-occurrence requirements, as specified in 40 CFR §264.147, and provide liability insurance in accordance with ORS 466.105(5), and 40 CFR §264.147(a) unless exempted by state or federal law.

II.N. POST-TRIAL BURN RISK ASSESSMENT REQUIREMENTS

II.N.1. The Permittee shall submit for Department approval within 360 days after the effective date of this permit condition a Post-Trial Burn Risk Assessment Workplan that must, at a minimum, but not be limited to, address the following items:

i. Who will perform the Post-Trial Burn Risk Assessment (PostRA);

ii. What resources will be dedicated to perform the PostRA;

iii. Describe the schedule to perform the RA;

iv. Describe the status of submitting the PostRA protocol, as required by permit condition II.N.2., and in accordance with 40 CFR §270.33(a)(2); and,

v. Provide an operational history and data evaluation of the onsite meteorological station

II.N.2. The Permittee shall submit for Department approval, a PostRA protocol within 540 days after the effective date of this permit condition. The PostRA will address, at a minimum, but not be limited to, the following essential elements:

a. A protocol to address at a minimum, but not be limited to, the constituents of potential concern (COPCs) evaluated in the Pre-Trial Burn Risk Assessment, newly identified compounds, and mass of unidentified emissions for the four human health scenarios and for the ecological assessment;

b. A protocol that assesses the potential incremental risk after each trial burn and the performance test;

c. A list of COPCs with updated toxicity and chemical values, to include those COPCs originally evaluated in the Pretrial Burn Risk Assessment, newly identified compounds, and mass of unidentified emissions;

d. A determination of the air dispersion model(s) to be used and the algorithms (equations, for example) to assess receptor exposure; and,

e. Trial burn/performance test stack and exit gas parameters.

II.N.3. The Permittee cannot begin trial burn and performance test operations (except permit conditions VI.A.1 through VI.A.5) without receiving written Department approvals in accordance with permit conditions II.N.1 and II.N.2.

II.N.4. The Permittee shall operate an onsite meteorological station until closure of the UMCDF to collect sufficient data in order to perform the Post-Trial Burn Risk Assessment.

II.O. CARBON FILTER OPERATION

II.O.1. The Munition Demilitarization Building (MDB) and Laboratory filter systems shall be operational during chemical agent operations at the UMCDF.

II.O.2. The Munition Demilitarization Building (MDB) filter system shall be monitored as follows:

i. Continuous chemical agent monitoring and data recording utilizing the ACAMS and the DAAMs will be performed between carbon banks 1 and 2, 2 and 3, 3 and 4, 4 and 5, 5 and 6, and in the filter stack. The ACAMS monitoring between carbon banks 1 and 2, 2 and 3, 3 and 4, and 4 and 5 will be conducted by a single ACAMS connected to a manifold that samples each location between carbon banks sequentially. The ACAMS monitoring between carbon banks 5 and 6 and the filter stack will include a dual dedicated ACAMS which will alternate sampling and the analytical cycle times.

ii. Continuous pressure drop monitoring and data recording will be performed across each prefilter and high efficiency particulate air filter element.

II.O.3. The Laboratory filter system shall be monitored as follows:

i. Continuous chemical agent monitoring and data recording utilizing the ACAMS and the DAAMs will be performed between carbon banks 1 and 2, and in the filter stack. The lab filter stack shall have a dedicated ACAMS.

ii. Continuous pressure drop monitoring and data recording will be performed across each prefilter and high efficiency particulate air filter element.

II.O.4. The MDB filter system shall be maintained according to Table 2-2 of this permit.

II.O.5. The Laboratory filter system shall be maintained according to Table 2-3 of this permit.

II.O.6. All carbon banks shall be changed out prior to commencing a new chemical agent campaign.

II.O.7. Prefilters and high efficiency particulate air filters in the MDB and laboratory filter systems shall be changed when the pressure drop across the filter element exceeds 10-inch water column.

II.O.8. The MDB and Laboratory filter systems shall be leak checked in accordance with Army SOPs at the following minimum frequencies:

i. Initial set-up of filter unit leak check;

a. Carbon trays shall be leak checked prior to installation.

b. Carbon banks shall be leak checked once carbon trays are in place in the unit.

ii. Leak check frequency after initial set-up of filter unit;

a. Carbon banks and filter elements shall be leak checked whenever an element of the bank is installed, modified or replaced.

b. Carbon banks and filter elements shall be leaked checked at least semi-annually.

c. Carbon banks and filter elements shall be leak checked following painting or fire in ventilation area.

II.O.9. The heating, ventilation, and air conditioning stack that services the carbon filter operation must have an ACAMS monitor. The emissions from the carbon filter operation shall not exceed the following concentrations:

	Chemical Agent - Concentration (mg/m^3)		
	VX	GB	HD
Maximum Hourly Rolling Average Stack Emission	0.00006	0.00006	0.006
Maximum Instantaneous Stack Emission	0.0003	0.0003	0.03

II.O.10. The Permittee shall submit to the Department within 360 days of the effective date of this permit an engineering report and the appropriate permit modification discussing and recommending the installation and monitoring of secondary containment structures for the MDB carbon filters, Laboratory carbon filter system, and the PAS carbon filter system. (Similar to the system used at the Tooele Chemical Disposal Facility.)

II.P. AIR EMISSION STANDARDS

II.P.1. GENERAL INTRODUCTION

Phase I Organic Air Emission Standards consist of 40 CFR Part 264, for hazardous waste treatment, storage, and disposal (TSD) facilities. Title 40 CFR Part 264.1032 and Part 265.1032 contain emission standards for process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, and air or steam stripping operations that process hazardous waste with an annual average total organic concentration of at least ten (10) parts per million (ppm) by weight. Part 264.1058 contain emission standards that address leaks from specific equipment (i.e., pumps, valves, compressors, etc.) that contains or contacts hazardous waste that has a total organic concentration of at least ten percent by weight.

II.P.2. STANDARDS

i. Prior to installing or using any equipment with process vents subject to the requirements of Part 264.1032 the Permittee shall supply the specific Part B information required pursuant to 40 CFR §270.24, and shall obtain a permit modification in accordance with the provisions of 40 CFR §270.42. [40 CFR 264 Subpart AA]

ii. Prior to installing or using any additional equipment subject to the requirements of Part 264, the Permittee shall supply the specific Part B information required pursuant to Part 270.25, and shall obtain a permit modification in accordance with the provisions of 40 CFR §270.42.[40 CFR Subpart BB]

iii. The Permittee shall comply with the organic air emission standards for equipment leaks in Part 264.1050 as applicable and as specifically set forth in Attachment 3 of this permit. [40 CFR 264 Subpart BB]

iv. The Permittee shall comply with the organic air emission standards for tanks and containers as set forth in 40 CFR Subpart CC. The Permittee shall obtain a permit modification to incorporate 40 CFR 264 Subpart CC standards into the Part B application and the permit within 230 days after the effective date of this permit condition. [40 CFR §270.32(b)(2)]

II.Q. Equivalent Materials/Information

If certain equipment, materials, procedures, and administrative information (such as names, phone numbers, addresses) are specified in this permit, the Permittee is allowed to use an equivalent or superior. Use of such equivalent or superior items shall not be considered a modification of the permit; however, the Permittee must place the revision, accompanied by a narrative explanation and the date the revision became effective, in the operating record and submit the revision to the Department at the regional office in Bend and one copy to each of the field offices in Hermiston and Pendleton. Upon review of the revision, if deemed necessary, the Department may ask the Permittee to submit a permit modification in accordance with 40 CFR §270.42.

II.R. PAS CARBON FILTER UNIT

The Permittee shall build and operate the Pollution Abatement System (PAS)/PAS Filter Systems for each incinerator in accordance with the appropriate drawings of Volume 5, Attachment D-3 and Volume VII of the application, Sections D-5B-02, D-5B-07, D-6B-02, D-6B-04, D-7B-02, D-7B-05, D-8B-02, D-8B-04, and D-8B-05. Removal of any component of the PAS Filter Systems, including but not limited to, the quench tower, venturi scrubber, packed scrubber tower, demister, or carbon filter system shall be a Class 3 permit modification and shall require Commission approval.

TABLE 2-1 UMCDF SITE PROCESS AREAS AND EQUIPMENT

UNPACK AREA

Conveyor Systems

Airlock

ROCKET PROCESS SYSTEM

Computerized Process Control System Interlocks

Monorail With Lifting Device System

Indexing Drum

Rotary Metering Input Assembly

Blast Gate Valves

Blast Gates/Doors

Airhole puncher

Drain puncher

Rocket Shear Machine/Burster Size Reduction Machine

Conveyor System

MINE PROCESS SYSTEM

Computerized Process Control System Interlocks

Monorail with Lifting Device System

Conveyor Systems

Glove Box

Blast Gates/Doors

Blast Gate Valves

Mine Machine

Drain Station

Pushout Station

PROJECTILE AND MORTAR PROCESSING SYSTEMS

Computerized Process Control System Interlocks

Monorail with Lifting Device System

Conveyor Systems

Blast Gates/Doors

Blast Gate Valves

Projectile/Mortar Disassembly Machines

Multiposition Loader

Lift Station

Pick & Place Device

TON CONTAINER PROCESSING SYSTEM

Computerized Process Control System Interlocks

Monorail with Lifting Device System

Conveyor Systems

Bulk Drain Station

Lift Station

TABLE 2-2 CARBON CHANGEOUT SCHEDULE FOR THE MDB FILTER SYSTEM

CHEMICAL AGENT	DETECTION LEVEL	MONITOR LOCATION	BANKS TO BE REPLACED	TIME FRAME FOR BANKS REPLACEMENT
VX, GB Mustard	ABOVE TWA Above TWA	BETWEEN BANKS 1 AND 2	REPLACE BANKS 1 AND 2 OF THE AFFECTED CARBON FILTER UNIT	WITHIN 3 MONTHS OF DETECTION
VX, GB Mustard	ABOVE TWA Above TWA	BETWEEN BANKS 2 AND 3	REPLACE BANKS 1, 2,3 AND 6 OF THE AFFECTED CARBON FILTER UNIT	WITHIN 3 MONTHS OF DETECTION
VX, GB Mustard	ABOVE TWA Above TWA	BETWEEN BANKS 3 AND 4	REPLACE BANKS 1,2,3,4, AND 6 OF THE AFFECTED CARBON FILTER UNIT	SUSPENSION OF CHEMICAL AGENT PROCESSING BEING ADDRESSED BY THE FILTER UNIT AND IMMEDIATE REPLACEMENT
VX, GB Mustard	ABOVE TWA Above TWA	BETWEEN BANKS 4 AND 5, 5 AND 6	REPLACE ALL BANKS OF THE AFFECTED CARBON FILTER UNIT	SUSPENSION OF CHEMICAL AGENT PROCESSING BEING ADDRESSED BY THE FILTER UNIT AND IMMEDIATE REPLACEMENT
VX, GB Mustard	.2 ASC .2 TWA	FILTER STACK	REPLACE ALL BANKS OF THE AFFECTED CARBON FILTER UNIT	SUSPENSION OF CHEMICAL AGENT PROCESSING BEING ADDRESSED BY THE FILTER UNIT AND IMMEDIATE REPLACEMENT

TABLE 2-3 CARBON CHANGEOUT SCHEDULE FOR THE LABORATORY SYSTEM

CHEMICAL AGENT	DETECTION LEVEL	MONITOR LOCATION	BANKS TO BE REPLACED	TIME FRAME FOR BANKS REPLACEMENT
VX, GB Mustard	ABOVE TWA Above TWA	BETWEEN BANKS 1 AND 2	REPLACE BANKS 1 AND 2 OF THE AFFECTED CARBON FILTER UNIT	SUSPENSION OF CHEMICAL AGENT PROCESSING BEING ADDRESSED BY THE FILTER UNIT AND IMMEDIATE REPLACEMENT
VX, GB Mustard	.2 ASC .2 TWA	FILTER STACK	REPLACE ALL BANKS OF THE AFFECTED CARBON FILTER UNIT	SUSPENSION OF CHEMICAL AGENT PROCESSING BEING ADDRESSED BY THE FILTER UNIT AND IMMEDIATE REPLACEMENT

MODULE III - CONTAINER STORAGE

The UMCDF site shall be permitted for one container storage area, divided into two parts designated as the East and West Storage Areas which are part of the Container Handling Building (Figure 3-1 of the permit). The Container Handling Building (CHB) shall be limited to the storage of munitions and various munition components containing chemical agents, explosives, propellants, and bulk containers containing chemical agents (hazardous waste numbers D001, D002, D003, D004, D005, D006, D007, D008, D009, D010, D011, D022, D028, D030, D043, P998, P999).

The UMCDF site has initially identified two 90 day storage areas: the Residue Handling Area (RHA) within the Process and Utility Building and the Toxic Maintenance Area (TMA) in the Munitions Demilitarization Building. All containers in the RHA and TMA shall be managed in accordance with the generator requirements of Part 262.34 as less than 90 day accumulation areas.

Munitions except spray tanks will be stored in large on-site transport containers (ONCs) which are resistant to leaks due to fires, drops, and collisions; spray tanks will be stored in shipping/overpack containers. The permitted container storage area has conveyor tracks that route the ONCs to the Munitions Demilitarization Building (MDB) for demilitarization processing. Secondary containment for the permitted area of the CHB is provided by the CHB sump and trenches and by the bermed portion of the CHB floor.

III.A. CONTAINER HANDLING BUILDING DESIGN, CONSTRUCTION AND OPERATION

III.A.1. The Permittee shall design and construct the CHB as specified in:

i. All applicable drawings in Volume V, Attachment D-3 of the Application

ii. The applicable specifications found in Volume VI, Attachment D-3 of the Application.

III.A.2. The Permittee shall design and construct the secondary containment sump systems identified in Table 3-2 of the permit as specified in:

i. All applicable drawings in Volume V, Attachment D-3 of the Application;

ii. The applicable specifications found in Volume VI, Attachment D-3 of the Application; and,

iii. Table 4-4 of this permit.

III.A.3. The Permittee shall operate the CHB as specified in Volume II, Sections D-3(a)(2), D-3(a)(3), and D-3(a)(4) of the Application.

III.B. PERMITTED AND PROHIBITED WASTE IN THE CHB STORAGE AREA

III.B.1. The Permittee shall only store the munitions containing the hazardous wastes listed in Table 3-1 of this permit in the permitted storage area of the CHB in accordance with the terms of this permit. Chemical munitions will be stored in the permitted storage area only when contained within an ONC with an exception to spray tanks which have their own shipping/overpack containers.

III.B.2. The permitted container storage area shall consist of the East and West Storage Areas within the CHB as designated in Figure 3-1 of this permit. The Permittee shall not store ONCs or spray tanks within the unloading areas, the conveyor corridor, or the lift areas of the CHB as designated in Figures 3-1 of this permit.

III.B.3. The Permittee shall not store more than 24 ONCs or more than 8 spray tanks in the East or West Storage Areas or more than a total of 48 ONCs or 16 spray tanks in the permitted storage area of the CHB at any one time.

III.B.4. The Permittee shall not exceed the maximum allowable number of munitions per individual ONC as specified below and shall not exceed the maximum allowable number of munitions in the permitted storage area of the CHB as specified below:

Munition	Maximum Allowable Munitions/ONC	Maximum Allowable Munitions/CHB
155 mm Projectile	72	3456
8" Projectile	36	1728
MC-1 Bomb(750 lb.)	4	192
M55 Rocket	30	1440
Mine (w/activators and fuses)	36	1728
Ton Container	2	96
Spray Tank	NA	16
MK-94 Bomb(500 lb.)	5	240

III.C. CONDITION OF ONCS AND SPRAY TANK SHIPPING/OVERPACK CONTAINERS

III.C.1. If an ONC or spray tank shipping/overpack container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if the ONC or spray tank shipping/overpack container begins to leak, the Permittee shall transfer the ONC or spray tank shipping/overpack container to the Toxic Maintenance Area (TMA) for immediate unloading of it's contents and if agent is detected, complete decontamination prior to removal of the ONC or spray tank shipping/overpack container from the TMA. All spray tank shipping/overpack containers holding hazardous waste shall be used only once.

III.C.2. If an ONC or spray tank shipping/overpack container has been found to be not in good condition as specified in permit condition III.C.1, the ONC or spray tank shipping/overpack container shall not be used to transport chemical agent containing munitions or ton containers. Defective ONCs which have been decontaminated, repaired and re-certified according to the manufacturer's specifications may be re-used.

III.D. COMPATIBILITY OF WASTE WITH ONCS AND SPRAY TANK SHIPPING/OVERPACK CONTAINERS

The Permittee shall assure that the ability of the spray tank shipping/overpack containers and the ONCs to contain the hazardous waste, munitions and ton containers is not impaired, in accordance with 40 CFR §264.172.

III.E. MANAGEMENT OF ONCS AND SPRAY TANK SHIPPING/OVERPACK CONTAINERS

III.E.1. The Permittee shall deliver ONCs or spray tank shipping/overpack containers to the CHB only during daylight hours. Leaking munitions within ONCs or leaking spray tank shipping/overpack containers will be processed before all other ONCs or spray tank shipping/overpack containers unless given verbal or written approval from Department manager. The Permittee shall keep all ONCs or spray tank shipping/overpack containers closed during storage and transport. The Permittee shall not handle or store ONCs or spray tank shipping/overpack containers in a manner which may rupture the ONC or spray tank shipping/overpack container or cause it to leak.

III.E.2. ONCs containing leaking munitions or leaking spray tank shipping/overpack containers shall not be returned to K-Block for storage or accumulation without Department approval. No agent F998 and F999 agent-contaminated material shall be sent from the UMCDF to K-Block for storage or accumulation unless expressly allowed in writing from the Department. The Permittee shall comply with any written requirements in the Department approval.

III.E.3. The Permittee shall not place any munition in an ONC that previously held chemical munitions in which a leak was detected unless the ONC has been completely decontaminated and recertified.

III.E.4. Any ONC or spray tank shipping/overpack container that remains in the CHB longer than seven (7) days shall be tested for leaking munitions/ton containers, at least once every seven days from the date the ONC or spray tank shipping/overpack container entered the permitted storage area of the CHB according to Attachment 3 of this permit and Volume III, Attachment D-2 of the Application.

III.E.5. The Permittee shall ensure that each ONC or spray tank shipping/overpack container is clearly marked to identify its content and the date each period of accumulation began as specified in 40 CFR §268.50(a)(2)(i).

III.F. CONTAINMENT SYSTEM

III.F.1. The containment system in the Container Handling Building shall consist of the bermed floor area, all sumps listed in Table 3-2 of this permit and any associated trenches.

III.F.2. The Permittee shall operate the containment system in accordance with Volume IX, Section F-2b(1) of the Application.

III.F.3. Sealants and coatings for the containment system will be chemical resistant epoxy as specified in Volume VI, Attachment D-3, Section D-4B-18 of the Application. The floor, sump and trenches located in the CHB will be inspected weekly according to permit condition III.G.

III.F.4. The Permittee shall consider any materials or liquids detected in the sumps to be a hazardous waste until the Permittee has sampled and analyzed the materials or liquids for chemical agent, TCLP metals, TCLP organics and any other suspected hazardous waste or hazardous waste constituents, in accordance with the methods in the Waste Analysis Plan in Attachment 2 of this permit.

III.F.5. The Permittee shall send those liquids that are determined to be hazardous waste to a Spent Decontamination Holding Tank. Materials or liquids that are sampled and analyzed and found not to be hazardous waste may be managed as non-hazardous waste but must be evacuated from the sump according to permit condition III.F.6.

III.F.6. The Permittee shall remove all materials or liquids in the containment sumps by either a vacuum truck or dedicated sump pump. The dedicated sump pump system may not leave a residual liquid depth of more than 3/4 inch. All sumps evacuated using a vacuum truck shall not leave pumpable residual liquids in the sump.

III.F.7. Operation of the sump level indicators shall be visually inspected per the Inspection Schedule in Attachment 3 of this permit and shall be tested upon installation, annually, and between every chemical agent change as specified in Attachment 3 of this permit.

III.G. INSPECTION SCHEDULES AND PROCEDURES

The Permittee shall inspect the CHB weekly to detect leaks from the ONCs and deterioration of the ONCs and/or the containment system caused by corrosion and other factors in accordance with the Inspection Schedule, in Attachment 3 of this permit. All inspection data shall be recorded and the records shall be placed in the operating record in accordance with permit condition II.I.

III.H. RECORDKEEPING

The Permittee shall document the results of all waste analyses and tests in the operating record, in accordance with permit condition II.I.

III.I. CLOSURE

At closure of the CHB area, the Permittee shall remove all hazardous waste and hazardous waste constituents from the CHB and the secondary containment system, in accordance with the procedures in the Closure Plan in Volume XII, Section I of the Application as revised in accordance with permit condition II.J.1.

III.J. REACTIVE WASTE

III.J.1. The Permittee shall take precautions to prevent accidental reaction of wastes as stated in Volume IX, Section F-5 of the Application.

TABLE 3-1 HAZARDOUS WASTES TO BE STORED IN THE PERMITTED AREA OF THE CONTAINER HANDLING BUILDING.

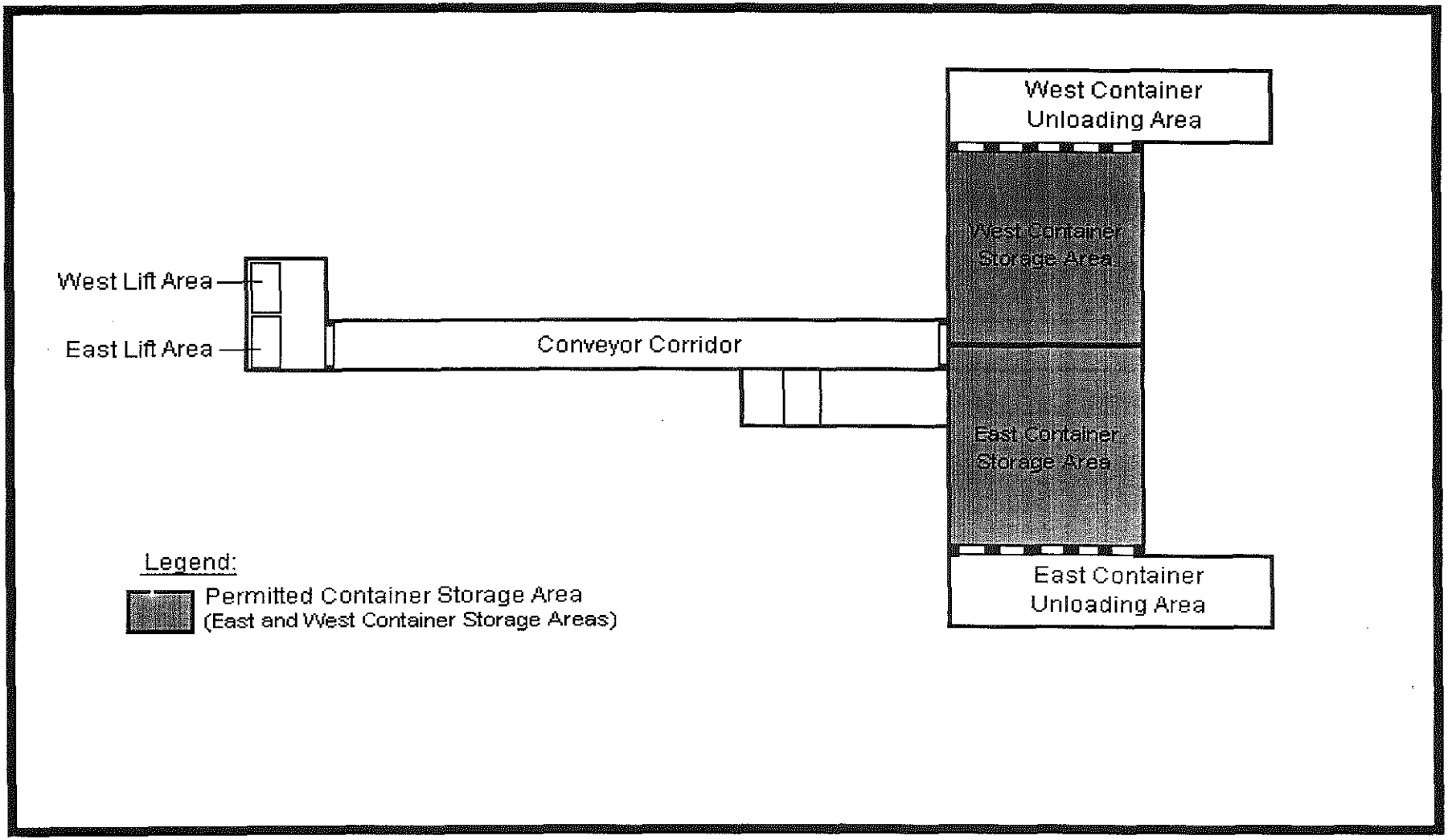
Description of Hazardous Waste	Oregon, EPA Hazardous Waste I.D. Numbers
Agent GB	D001-D011,D022,D028,D030, D043,P999
Agent VX	D001-D011,D022,D028,D030, D043,P999
Mustard Agent - HD	D001-D011,D022,D028,D030, D043,P998
Explosives	D003
Propellants	D003,D030
Fuzes	D003
Detonators	D003,D005,D008
Squibs	D003,D008
Igniters	D003
Initiators	D003
Bursters	D003
Rocket Components	D003
Munition Body Components	D003
Mine Drums	D003

TABLE 3-2 HAZARDOUS WASTE SECONDARY CONTAINMENT SUMPS IN THE CHB

Sump I.D. Number[1]	Maximum Allowable Capacity (gallons)	Dimensions of Sump(feet)	Additional Containment Volume (gallons)	Location Reference		
				Drawing Column-Row[2]	Floor	Room[3]
CHB-SUMP-101	85	2.25x2.25x2.25	none required	E-12.5	1	CHB EAST
CHB-SUMP-102	85	2.25x2.25x2.25	none required	E-2.2	1	CHB WEST
CHB-SUMP-103	1196		none required	E-8	1	CHB EAST

[1] CHB = Container Handling Building
[2] Reference building column-row numbers from Drawings UM-7-S-1 and UM-7-S-2.
[3] CHB WEST= Container Storage Building West Area, CHB EAST=Container Storage Building East Area.

FIGURE 3-1 PERMITTED STORAGE AREAS IN THE CHB



MODULE IV - TANK SYSTEMS

This Module describes the Tank Systems at the Umatilla Chemical Agent Disposal Facility. There are three permitted tank systems at the UMCDF site. These three tank systems (listed in Table 4-1 of this permit) include: the Agent Collection Tank System, Spent Decontamination Holding Tank System and the Brine Surge Tank System. A tank system generally consists of holding tanks and/or surge tanks, containment sumps or trenches, pumps, associated piping and any ancillary equipment.

IV.A. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

IV.A.1. The Permittee shall store only the specified hazardous wastes in the specified tank systems identified in Tables 4-1 and 4-2 of this permit during Shakedown Periods I and II, Surrogate and Chemical Agent Trial Burn Periods, and Post Trial Burn Periods. (See Module VI of this permit)

IV.A.2. The Permittee shall store only the specified hazardous wastes in the hazardous waste tank systems identified in Table 4-1 and 4-2 of this permit during normal operations. (See Module VII of this permit)

IV.A.3. The Permittee is prohibited from storing hazardous wastes not listed in Table 4-1 of this permit in the hazardous waste tank systems listed in Tables 4-1 and 4-2 of this permit except as identified in permit condition I.A.

IV.B. TANK SYSTEM DESIGN AND CONSTRUCTION

IV.B.1. The Permittee shall design and construct the Agent Collection Tank System (ACS-TANK-101 and ACS-TANK-102), the Spent Decontamination Holding Tank System (SDS-TANK-101, SDS-TANK-102, and SDS-TANK-103), the Brine Surge Tank System (BRA-TANK-101, BRA-TANK-102, BRA-TANK-201, BRA-TANK-202) as specified in:

i. All applicable drawings in Volume V, Attachment D-3 of the Application;

ii. The applicable specifications found in Volume VI, Attachment D-3, Section D-4b of the Application.

IV.B.2. The Permittee shall design and construct the primary containment and secondary containment sump systems identified in Tables 4-2 and 4-3 of this permit as specified in:

i. All applicable drawings in Volume V, Attachment D-3 of the Application;

ii. The applicable specifications found in Volume VI, Attachment D-3, Section D-4b of the Application; and

iii. Table 4-4 of this permit.

IV.B.3. The Permittee shall provide the external corrosion protection for the tank systems identified in Tables 4-1, 4-2 and 4-3 of this permit using the methods in Volume VI, Attachment D-3, Section D-4b of the Application.

IV.B.4. The Permittee shall not install any altered hazardous waste tank system until such time the Department has:

i. Received certification from an independent, registered professional engineer, that attests to the structural integrity and the suitability of the altered tank system for handling the specified hazardous waste in accordance with 40 CFR §264.192.

ii. Approved the design and specifications of the altered tank system; and

iii. Received and approved a permit modification in accordance with 40 CFR §270.42.

IV.C. TANK SYSTEM INSTALLATION

IV.C.1. The Permittee shall install the Agent Collection Tank System (ACS-TANK-101 and ACS-TANK-102) and, the Spent Decontamination Holding Tank System (SDS-TANK-101, SDS-TANK-102, and SDS-TANK-103) in accordance with the installation specifications in Volume VI, Attachment D-3, Section D-4B-02 of the Application.

IV.C.2. The Permittee shall install the Brine Surge Tank System (BRA-TANK-101, BRA-TANK-102, BRA-TANK-201, BRA-TANK-202) in accordance with the installation specifications in Volume VI, Attachment D-3, Section D-4B-03 of the Application.

IV.C.3. The Permittee shall install the Primary Containment Sump Systems listed in Table 4-2 of this permit in accordance with the installation specifications in Volume VI, Attachment D-3, Section D-4B-03 of the Application.

IV.C.4. The Permittee shall obtain and submit to the Department within 30 days of completing installation of each tank system a written certification from an independent, qualified, installation inspector or an independent, qualified, registered professional engineer attesting that proper installation procedures were used for each tank system listed in Tables 4-1 and 4-2 of this permit. The independent tank system installation inspection and subsequent written certification, shall consider, but not be limited to, the following tank system installation documentation: [40 CFR §264.192(b)]

i. Field installation report with date of installation;

ii. Approved welding procedures;

iii. Welder qualifications and certifications;

iv. Hydro-test reports in accordance with the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section VIII, Division 1;

v. Tester credentials;

vi. Field inspector credentials;

vii. Field inspection reports;

viii. Field waiver reports; and

ix. Non-compliance reports and corrective action (including field waiver reports) and repair reports.

IV.C.5. The Permittee shall obtain and submit to the Department within 30 days of completing installation of each tank system a written certification from an independent, qualified, installation inspector or an independent, qualified, registered professional engineer attesting that the tank system has sufficient structural integrity to store hazardous waste. The independent tank system certification documentation submitted to the Department for the Agent Collection Tank System (ACS-TANK-101 and ACS-TANK-102) and the Spent Decontamination Holding Tank System (SDS-TANK-101, SDS-TANK-102, and SDS-TANK-103), shall include, but not be limited to, the following manufacturing design, fabrication, and testing documentation: [40 CFR §264.192(a)]

i. Shop drawings with dimensional and capacity data;

ii. Vessel wall thickness and nozzle reinforcement calculations;

iii. Vessel structural support calculations;

iv. Approved welding procedures;

v. Welder qualifications and certifications;

vi. Material reports and mill certifications;

vii. Results of X-ray testing;

viii. Tester credential;

ix. Non-compliance reports and corrective action;

x. Hydrotest reports;

xi. ASME code data reports;

xii. Shop inspection reports; and

xiii. Shop inspector credentials.

IV.C.6. The Permittee shall obtain and submit to the Department within 30 days of completing installation of each tank system a written certification from an independent, qualified, installation inspector or an independent, qualified, registered professional engineer attesting that proper installation procedures were used. The independent tank system installation certification documentation submitted to the Department for the Brine Surge Tanks (BRA-TANK-101, BRA-TANK-102, BRA-TANK-201, and BRA-TANK-202) shall include, but not be limited to, the following manufacturing design, fabrication, and testing documentation:

i. Shop drawings with dimensional and capacity data;

ii. Design calculations, including seismic and wind loading;

iii. Approved welding procedures;

iv. Welder qualifications and certifications;

v. Material reports and mill certifications;

vi. Results of non-destructive examinations;

vii. Qualifications of NDE inspectors;

viii. Non-compliance report and corrective action

ix. Leak test report;

x. Shop inspection reports; and

xi. Shop inspector credentials.

IV.C.7. The Permittee shall obtain and submit to the Department within 30 days of completing installation of each tank system a written certification from an independent, qualified, installation inspector or an independent, qualified, registered professional engineer attesting that proper installation procedures for the Primary Containment System sumps listed in Table 4-2 were used. The independent tank system installation certification documentation submitted to the Department for the Primary Containment System Sumps listed in Table 4-2 of this permit shall include, but not be limited to, the following manufacturing design, fabrication, and testing documentation:

i. Shop drawings with dimensional and capacity data;

ii. Approved welding procedures;

iii. Material reports and mill certifications;

iv. Shop inspection reports; and

v. Shop inspector credentials.

IV.C.8. As specified in permit conditions IV.C.4., IV.C.5., IV.C.6., and IV.C.7. for each hazardous waste tank system identified in Tables 4-1, 4-2, and 4-3, the Permittee shall:

i. Maintain the installation documentation on file at the UCD until such time that the tank system is certified closed in accordance with permit condition II.J.; and

ii. At any time, provide the installation documentation by certified mail, express mail, or hand delivery to the Department within fifteen (15) days upon receipt of written request.

IV.C.9. Prior to operating a hazardous waste tank system for Shakedown Period I, the Permittee shall comply with permit conditions I.R., and IV.C.1. through IV.C.7.

IV.D. GENERAL OPERATING REQUIREMENTS

IV.D.1. The Permittee shall not place hazardous wastes, treatment reagents, or other materials in the tank system(s) if they could cause the tank system(s), to rupture, leak, corrode, or otherwise fail.

IV.D.2. The Permittee shall operate the tank systems to prevent spills and overflows using the procedures and equipment described in Volume II, Section D-4 of the Application.

IV.D.3. The Permittee shall install tank level transmitters indicating an alarm at low level, low-low level, high level, and high-high level. High-high level alarms shall correspond to the maximum allowable liquid height given in Table 4-1 of this permit.

IV.D.4. The Permittee shall install primary containment and secondary containment level transmitters for the sumps listed in Tables 4-2 and 4-3 of this permit that will indicate and send alarms to the control room at a low-level, high level, and a high-high level.

IV.D.5. The Permittee shall ensure that each tank is clearly marked with a description of its contents. The operating record shall contain the quantity of each hazardous waste received, and the date of accumulation for each tank as recorded and maintained in accordance with 40 CFR §264.73 and 40 CFR §268.50 (a)(2)(ii)

IV.E. AGENT COLLECTION TANK SYSTEM OPERATING CONDITIONS

IV.E.1. The Agent Collection Tank system consists of the agent holding tank (ACS-TANK-101), the agent surge tank (ACS-TANK-102), agent tank secondary containment sump (MDB-Sump-134), pumps (ACS-Pump-102, and ACS-Pump-201), associated piping, and ancillary equipment.

IV.E.2. The Agent Surge Tank (ACS-TANK-102) shall not be used as a primary storage tank except in emergency situations.

IV.E.3. The carbon filter on the Agent Collection Tanks shall be changed out at least once every 30 operational days and this activity shall be recorded in the operating record. The spent carbon from the Agent Collection tanks shall be treated in the Dunnage Incinerator.

IV.F. SPENT DECONTAMINATION HOLDING TANK SYSTEM OPERATING CONDITIONS

IV.F.1. The Spent Decontamination Holding Tank System consists of three spent decontamination holding tanks (SDS-TANK-101, SDS-TANK-102, and SDS-TANK-103), primary containment sump (as listed in Table 4-2 of this permit), pumps (SDS-Pump-171, SDS-Pump-172, and SDS-Pump-173), trenches, associated piping, and ancillary equipment.

IV.F.2. The Permittee shall maintain a minimum of one Spent Decontamination Holding Tank (either SDS-TANK-101, SDS-TANK-102, or SDS-TANK-103) empty when chemical agent is being managed at the UMCDF site.

IV.F.3. The Permittee may utilize the empty tank specified in permit condition IV.F.2. in the event of a waste spill. (i.e., ACS-TANK-102 failure, Spent Decontamination Tank failure, munition overpack failure, etc.)

IV.F.4. The Permittee shall not process any munitions which have not passed the Explosive Containment Vestibule in the munition processing line at the time of a waste spill until such time that the circumstance(s) which resulted in the waste spill has been rectified and a minimum of one Spent Decontamination Holding Tank is empty, as specified in permit condition IV.F.2.

IV.F.5. The Permittee shall sample and analyze the waste in the Spent Decontamination Holding Tank System in accordance with the Waste Analysis Plan in Attachment 2 of this permit.

IV.G. BRINE SURGE TANK SYSTEM OPERATING CONDITIONS

IV.G.1. The Brine Surge system consists of four Brine Surge tanks (BRA-TANK-101, BRA-TANK-102, BRA-TANK-201, BRA-TANK-202), secondary containment sump, vault, pumps, associated piping, and ancillary equipment.

IV.G.2. The Permittee shall begin the procedure to switch waste feed from the BRA tank receiving waste to the empty BRA tank when the receiving tank's High level of seventeen (17) feet is reached.

IV.G.3. The Permittee shall sample and analyze the waste in the Brine Surge System in accordance with the Waste Analysis Plan in Attachment 2 of this permit.

IV.H. OPERATING PROCEDURES FOR PRIMARY CONTAINMENT SUMPS

IV.H.1. The Primary Sump shall consist of the sumps listed in Table 4-2 of this permit.

IV.H.2. The Permittee shall operate the Primary Sump System in accordance with Volume II, Section D-4 of the Application.

IV.H.3. Operation of the sump level indicators and interstitial probes shall be visually inspected per the inspection schedule in Attachment 3 of this permit and shall be tested upon installation, annually, and between every chemical agent change as specified in Attachment 3 of this permit.

IV.H.4. If any Primary Sump System indicates that the primary metal liner has leaked liquids into interstitial spaces, either by interstitial probe or visual inspection, the Permittee shall remove the metal sump liner and make the necessary repairs in accordance with 40 CFR §264.196. In addition, the Permittee shall visually inspect the concrete liner for any signs of deterioration of the coatings, leakage, corrosion or cracking of the concrete, and make the necessary repairs. Results of this inspection shall be placed in the Operating Record in accordance with permit condition II.I.1.i.

IV.H.5. All primary sumps shall have a dedicated sump pump and sump level indicators. All liquids evacuated from these sumps shall be pumped to the Spent Decontamination Holding Tanks.

IV.H.6. The Permittee shall maintain a liquid level in any of the primary containment sumps listed in Table 4-2 of this permit of no higher than the level indicated by the low-level alarm from the bottom of the sump.

IV.H.7. After every chemical agent change, primary sumps shall be tripled rinsed with decontamination solution.

IV.I. OPERATING PROCEDURES FOR SECONDARY CONTAINMENT SUMPS

IV.I.1. The secondary containment sumps shall consist of all sumps listed in Table 4-3 of this permit.

IV.I.2. The Permittee shall operate the secondary containment sumps in accordance with Volume II, Section D-4 of the Application.

IV.I.3. The Permittee shall consider any materials or liquids detected in the secondary sumps to be hazardous waste until the Permittee has sampled and analyzed the materials or liquids for chemical agent, TCLP metals, TCLP organics and any other suspected hazardous waste or hazardous waste constituents, in accordance with the methods of the Waste Analysis Plan in Attachment 2 of this permit.

IV.I.4. The Permittee shall send those liquids that are determined to be hazardous waste and non-agent to a Brine Surge Tank. For materials or liquids that are sampled and analyzed and found not to be hazardous waste, they will be managed as non-hazardous waste but must be evacuated from the sump.

IV.I.5. The Permittee shall remove all materials or liquids in the secondary sumps by either a vacuum truck or dedicated sump pump. The dedicated sump pump system may leave a residual liquid depth of no more than 3/4 inch. All sumps evacuated using a vacuum truck shall not leave any residual liquids in the sump.

IV.I.6. Operation of the sump level indicators shall be visually inspected per the inspection schedule in Attachment 3 of this permit and shall be tested upon installation, annually, and between every chemical agent change as specified in Attachment 3 of this permit.

IV.J. RESPONSE TO LEAKS OR SPILLS

IV.J.1. In the event of a leak or a spill from a hazardous waste tank system, or if a hazardous waste tank system becomes unfit for continued use, the Permittee shall remove the system from service immediately and complete the following actions:

i. Stop the flow of hazardous waste into the system and inspect the system to determine the cause of the release.

ii. Remove waste and accumulated precipitation from the system within twenty-four (24) hours of the detection of the leak to prevent further release and allow inspection and repair of the system. If the Permittee finds that it will be impossible to meet this time period, the Permittee shall notify the Department and demonstrate that the longer time period is required.

iii. If the collected material is a hazardous waste, it shall be managed in accordance with all applicable requirements of 40 CFR Parts 262 and 264.

iv. Contain visible releases to the environment. The Permittee shall immediately conduct a visual inspection of all releases to the environment and based on that inspection: (1) prevent further migration of the leak or spill to soils or surface water and (2) remove and properly dispose of any visible contamination of the soil or surface water.

v. Close the system in accordance with the Closure Plan specified in Volume XII, Section I of the Application unless the following actions are taken:

a. For a release caused by a spill that has not damaged the integrity of the system, the Permittee shall remove the released waste and make any necessary repairs to fully restore the integrity of the system before returning the tank system to service.

b. For a release caused by a leak from the primary tank system to the secondary containment system, the Permittee shall repair the primary system prior to returning it to service.

c. For a release to the environment caused by a leak from an aboveground portion of the ancillary equipment that does not have secondary containment, the Permittee shall repair the tank system or ancillary equipment before returning it to service.

d. If the Permittee replaces a component of the tank system to eliminate the leak, that component must satisfy the requirements for new tank systems or components in 40 CFR §264.192 and 40 CFR §264.193.

IV.J.2. For all major repairs to eliminate leaks or restore the integrity of the tank system, the Permittee shall obtain a certification by an independent, qualified, registered professional engineer that the repaired system is capable of handling hazardous wastes without release for the intended life of the system before returning the system to service. Examples of major repairs are: installation of an internal liner; repair of a ruptured tank; or, repair or replacement of a secondary containment vault.

IV.J.3. The Permittee shall submit to the Department all certifications of major repairs to correct leaks within seven (7) calendar days from returning the hazardous waste tank systems to use.

IV.K. INSPECTION SCHEDULES AND PROCEDURES

IV.K.1. The Permittee shall inspect the tank systems, in accordance with the Inspection Schedule specified in Attachment 3 of this permit.

IV.K.2. The Permittee shall inspect the overfill controls, in accordance with the schedule in Inspection Plan in Attachment 3 of this permit.

IV.L. RECORDKEEPING AND REPORTING

IV.L.1. The Permittee shall verbally report to the Department within twenty-four (24) hours of detection, when a leak or spill occurs from a hazardous waste tank system to the environment, in accordance with Condition I.U.

IV.L.2. Releases from a hazardous waste tank system that are contained within a secondary containment system shall be reported as required in permit condition IV.L.1. and shall be recorded in the Operating Record required by permit condition II.I.1.i.

IV.L.3. In addition to complying with the requirements of Condition I.U.2., within thirty (30) calendar days of detecting a release to the environment from a hazardous waste tank system, the Permittee shall submit a written report detailing, at a minimum, the following to the Department:

i. Likely route of migration of the release;

ii. Characteristics of the surrounding soil (including soil composition, geology, hydrogeology, and climate);

iii. Results of any monitoring or sampling conducted in connection with the release. If the Permittee finds it will be impossible to meet this time period, the Permittee shall provide the Department with a schedule of when the results will be available. This schedule must be provided before the required thirty (30) calendar day submittal period expires;

iv. Proximity of downgradient drinking water, surface water, and populated areas; and

v. Description of response actions taken or planned.

IV.L.4. The Permittee shall obtain, and keep on file at the UCD Facility, the written statements by those persons required to certify the design and installation of the tank system as specified in permit condition IV.C.4. until such time that the tank system is certified closed in accordance with permit condition II.J.6.

IV.L.5. The Permittee shall keep on file at the UCD Facility, the written hazardous waste tank system assessments in accordance with 40 CFR §264.192 of each hazardous waste tank system's integrity and suitability for handling hazardous waste, until such time that the hazardous waste tank system is certified closed in accordance with permit condition II.J.6.

IV.L.6. The Permittee shall maintain at the UCD Facility a record of the results of leak tests and integrity tests conducted, in accordance with permit conditions IV.C.4. or IV.J.2.

IV.L.7. In the event that a hazardous waste tank (including primary containment sumps) exceed the maximum allowable capacity designated for that tank in Tables 4-1 and 4-2 of this permit, the Permittee shall document in the Operating Record , as required by permit condition II.I.1.i., the following information:

i. The date and time of occurrence;

ii. Identify the tank by the identification number specified in Tables 4-1 and 4-2 of this permit;

iii. Indicate if any other available tank storage volume, within the system, is available and identify such tank by the tank identification number, specified in Tables 4-1 and 4-2;

iv. Indicate if the tank system automatically switched the feed or if an operator manually switched the feed from the high level tank to the tank with the available storage;

v. If no additional storage capacity was available within the storage system, indicate if the associated collection and/or treatment activities were automatically cutoff.

vi. Indicate if the high-high level tank(s)' intake valves were automatically closed;

vii. Indicate if any associated incinerator automatic waste feed cutoff interlocks were required. Identify the required interlock and whether the interlocks were successfully activated; and

viii. Describe the operating control procedures that allowed the tank system to reach the high-high level volume (e.g., why the operator was not successful in managing the waste within the high level volume, that is the working capacity).

IV.L.8. The Permittee shall document compliance with permit conditions IV.L.2. and IV.L.3. and place this documentation in the operating record for the UMCDF site.

IV.L.9. The Permittee shall document and record the results of each Spent Decontamination Holding Tank System waste analysis required by permit condition IV.F.5. in the Operating Record specified in permit condition II.I.1.i.

IV.L.10. The Permittee shall document and record the results of each Brine Surge Tank System waste analysis and any subsequent treatment required by permit condition IV.G.3. in the Operating Record specified in permit condition II.I.1.i.

IV.M. CLOSURE

IV.M.1. The Permittee shall close the hazardous waste tank systems listed in Tables 4-1 and 4-2 of this permit in accordance with the Closure Plan, included Volume XII, Section I of the Application.

IV.M.2. If the Permittee demonstrates that not all contaminated soils can be practically removed or decontaminated, at closure, the Permittee shall comply with the permit condition II.J.8.

IV.N. SPECIAL TANK PROVISIONS FOR IGNITABLE OR REACTIVE WASTES

IV.N.1. Six (6) months prior to the initiation of each Liquid Incinerator's shakedown period I, as specified in permit condition VI.B., the Permittee shall submit to the Department, by certified mail, express mail, or hand deliver, for approval, documentation that demonstrates the surrogate waste designated in permit condition VI.B.1.i is not "ignitable" in accordance with 40 CFR §264.198.

IV.N.2. If the surrogate waste designated in permit condition VI.B.1.i. is "ignitable", in accordance with 40 CFR §264.198, the Permittee shall provide a nitrogen blanket for ACS-TANK-101 and ACS-TANK-102, at any time that the "surrogate" waste specified in permit condition IV.B.1.i. is stored in the said tanks.

IV.O. SPECIAL TANK PROVISIONS FOR INCOMPATIBLE WASTES

IV.O.1. The Permittee shall not place hazardous waste in a tank system that has not been decontaminated and that previously held a different chemical agent and/or incompatible material.

IV.O.2. The Permittee shall only place the type of agent (e.g., GB, VX, and HD) specified for the particular campaign in the tank systems during any one chemical agent campaign.

IV.O.3. Prior to initiating a campaign with a new chemical agent, the Permittee shall triple rinse the tank systems identified in Tables 4-1 and 4-2 of this permit with the appropriate decontamination solution to remove or neutralize any chemical agent residuals.

IV.O.4. The Permittee shall collect the decontamination solution generated in permit condition IV.O.3. in the Spent Decontamination Holding Tank System (SDS-TANK-101, SDS-TANK-102, and/or SDS-TANK-103). The decontamination solution shall be treated in each Liquid Incinerator's secondary combustion chambers as specified in permit condition VI.B. during Shakedown Period 2, Trial Burn Periods, and Post Trial Burn Periods and in permit condition VII.B. during normal operations.

TABLE 4-1 HAZARDOUS WASTE STORAGE TANK SYSTEMS PERMITTED FOR USE DURING SHAKEDOWN PERIODS I AND II, SURROGATE AND CHEMICAL AGENT TRIAL BURNS AND NORMAL CHEMICAL AGENT OPERATIONS

Tank I.D. Number	Maximum Allowable Capacity (gallons)	Maximum Allowable Liquid Height[1] (feet)	Dimensions of Tank (feet)	Secondary Containment Required (gallons)	Permitted Hazardous Waste Activity	Permitted Hazardous Waste Codes
ACS-TANK-101	582	7.5	3.5 Diameter 8.0 Height	660	Storage of drained agent	D001 to D011, D022, D028, D030, D043, P998 and P999, Perchloroethylene-U210, D039, Monochlorobenzene-U037, and Trichloroethane-U226
ACS-TANK-102	1,130	8.75	5.0 Diameter 10.0 Height	1300	Storage of drained agent	D001 to D011, D022, D028, D030, D043, P998 and P999, Perchloroethylene-U210, D039, Monochlorobenzene-U037, and Trichloroethane-U226
SDS-TANK-101	2,168	9.25	6.0 Diameter 10.25 Height	2379	Storage of spent decontamination and lab waste	D001 to D011, D022, D028, D030, D043, P998 and P999, Perchloroethylene-U210, D039, Monochlorobenzene-U037, and Trichloroethane-U226
SDS-TANK-102	2,168	9.25	6.0 Diameter 10.25 Height	2379	Storage of spent decontamination and lab waste	D001 to D011, D022, D028, D030, D043, P998 and P999, Perchloroethylene-U210, D039, Monochlorobenzene-U037, and Trichloroethane-U226
SDS-TANK-103	2,168	9.25	6.0 Diameter 10.25 Height	2379	Storage of spent decontamination and lab waste	D001 to D011, D022, D028, D030, D043, P998 and P999, Perchloroethylene-U210, D039, Monochlorobenzene-U037, and Trichloroethane-U226

[1] High-High Level Alarms

Tank I.D. Number	Maximum Allowable Capacity (gallons)	Maximum Allowable Liquid Height[1] (feet)	Dimensions of Tank (feet)	Secondary Containment Required (gallons)	Permitted Hazardous Waste Activity	Permitted Hazardous Waste Codes
BRA-TANK-101	42,629	18.25	20.0 Diameter 20.0 Height	47000	Liquids from incinerator pollution abatement systems	D001 to D011, D022, D028, D030, D043, P998 and P999, Perchloroethylene-U210, D039, Monochlorobenzene-U037, and Trichloroethane-U226 Residues of Treatment-F998,F999
BRA-TANK-102	42,629	18.25	20.0 Diameter 20.0 Height	47000	Liquids from incinerator pollution abatement systems	D001 to D011, D022, D028, D030, D043, P998 and P999, Perchloroethylene-U210, D039, Monochlorobenzene-U037, and Trichloroethane-U226 Residues of Treatment-F998,F999
BRA-TANK-201	42,629	18.25	20.0 Diameter 20.0 Height	47000	Liquids from incinerator pollution abatement systems	D001 to D011, D022, D028, D030, D043, P998 and P999, Perchloroethylene-U210, D039, Monochlorobenzene-U037, and Trichloroethane-U226 Residues of Treatment-F998,F999
BRA-TANK-202	42,629	18.25	20.0 Diameter 20.0 Height	47000	Liquids from incinerator pollution abatement systems	D001 to D011, D022, D028, D030, D043, P998 and P999, Perchloroethylene-U210, D039, Monochlorobenzene-U037, and Trichloroethane-U226 Residues of Treatment-F998,F999

[1] High-High Level Alarms

TABLE 4-2 HAZARDOUS WASTE PRIMARY CONTAINMENT SUMP[1] SYSTEMS

Sump I.D. Number[2]	Maximum Allowable Sump Capacity (gallons)	Dimensions of Sump (feet)	Maximum Allowable Liquid Height[5] (inches)	Secondary Containment Volume (gallons)	Location Reference		
					Drawing[3] Column-Row	Floor	Room[4]
MDB-SUMP-101	89	2.3x2.3x2.25	1.0	134	L-3	1	TMA
MDB-SUMP-102	89	2.3x2.3x2.25	1.0	134	L-6	1	TMA
MDB-SUMP-103	89	2.3x2.3x2.25	1.0	134	P-5	1	DECON
MDB-SUMP-104	89	2.3x2.3x2.25	1.0	134	Q-6	1	M-CR
MDB-SUMP-105	89	2.3x2.3x2.25	1.0	134	M-6	1	M-CR
MDB-SUMP-106	89	2.3x2.3x2.25	1.0	134	M-9	1	BSA
MDB-SUMP-107	89	2.3x2.3x2.25	1.0	134	M-11	1	BSA
MDB-SUMP-108	89	2.3x2.3x2.25	1.0	134	T-6	1	M-CR-AL
MDB-SUMP-109	89	2.3x2.3x2.25	1.0	134	L-5	1P	AL
MDB-SUMP-110	89	2.3x2.3x2.25	1.0	134	B-10	2	ECV

[1] Hazardous waste sumps (meeting the RCRA definition of a tank) must comply with all applicable hazardous waste tank system requirements (40 CFR §264.190).

[2] MDB = Munition Demilitarization Building

[3] Reference building column-row numbers from Drawings UM-1-G-504, -5, -6, -7, -8, -9, -10, -11 and -UM-2-D-503.

[4] TMA = Toxic Maintenance Area, DECON = Decontamination, M-CR = Munition Corridor, BSA = 1st Floor Buffer Storage Area, M-CR-AL = Munitions Corridor Airlock, AL = Airlock, ECV = Explosive Containment Room Vestibule, ECR = Explosive Containment Room , MPB= Munitions Processing Bay, MPB-AL = Munitions Processing Bay Airlock

[5] Low-level alarm height. This is the level at which the sumps pump will automatically turn on and turn off.

Sump I.D. Number[2]	Maximum Allowable Sump Capacity (gallons)	Dimensions of Sump (feet)	Maximum Allowable Liquid Height[5] (inches)	Secondary Containment Volume (gallons)	Location Reference		
					Drawing[3] Column-Row	Floor	Room[4]
MDB-SUMP-111	89	2.3x2.3x2.25	1.0	134	D-10	2	ECV
MDB-SUMP-112	89	2.3x2.3x2.25	1.0	134	J-10	2	ECV
MDB-SUMP-113	89	2.3x2.3x2.25	1.0	134	C-6	2	ECR
MDB-SUMP-114	89	2.3x2.3x2.25	1.0	134	H-6	2	ECR
MDB-SUMP-115	89	2.3x2.3x2.25	1.0	134	B.1-3	2	M-CR
MDB-SUMP-116	89	2.3x2.3x2.25	1.0	134	D-3	2	M-CR
MDB-SUMP-117	89	2.3x2.3x2.25	1.0	134	H-3	2	M-CR
MDB-SUMP-118	89	2.3x2.3x2.25	1.0	134	M-3	2	M-CR
MDB-SUMP-119	89	2.3x2.3x2.25	1.0	134	N-3	2	M-CR
MDB-SUMP-120	89	2.3x2.3x2.25	1.0	134	D-6	2	M-CR

[1] Hazardous waste sumps (meeting the RCRA definition of a tank) must comply with all applicable hazardous waste tank system requirements (40 CFR §264.190).

[2] MDB = Munition Demilitarization Building

[3] Reference building column-row numbers from Drawings UM-1-G-504, -5, -6, -7, -8, -9, -10, -11 and UM-2-D-503.

[4] TMA = Toxic Maintenance Area, DECON = Decontamination, M-CR = Munition Corridor, BSA = 1st Floor Buffer Storage Area, M-CR-AL = Munitions Corridor Airlock, AL = Airlock, ECV = Explosive Containment Room Vestibule, ECR = Explosive Containment Room , MPB= Munitions Processing Bay, MPB-AL = Munitions Processing Bay Airlock

[5] Low-level alarm height. This is the level at which the sumps pump will automatically turn on and turn off.

Sump I.D. Number[2]	Maximum Allowable Sump Capacity (gallons)	Dimensions of Sump (feet)	Maximum Allowable Liquid Height[5] (inches)	Secondary Containment Volume (gallons)	Location Reference		
MDB-SUMP-121	89	2.3x2.3x2.25	1.0	134	H-6	2	M-CR
MDB-SUMP-122	89	2.3x2.3x2.25	1.0	134	B-7	2	M-CR
MDB-SUMP-123	89	2.3x2.3x2.25	1.0	134	K-7	2	M-CR
MDB-SUMP-124	89	2.3x2.3x2.25	1.0	134	B-5	2	M-CR
MDB-SUMP-125	89	2.3x2.3x2.25	1.0	134	L-6	2	MPB
MDB-SUMP-126	89	2.3x2.3x2.25	1.0	134	N-6	2	MPB
MDB-SUMP-127	89	2.3x2.3x2.25	1.0	134	L-8	2	MPB
MDB-SUMP-128	89	2.3x2.3x2.25	1.0	134	N-8	2	MPB
MDB-SUMP-129	89	2.3x2.3x2.25	1.0	134	M-11	2	MPB
MDB-SUMP-130	89	2.3x2.3x2.25	1.0	134	L-11	2	MPB
MDB-SUMP-131	89	2.3x2.3x2.25	1.0	134	N-11	2	MPB
MDB-SUMP-132	89	2.3x2.3x2.25	1.0	134	B.1-4	2	M-CR-AL
MDB-SUMP-133	89	2.3x2.3x2.25	1.0	134	L-8	2	MPB-AL
DDYR-CHPAN-101	210	7.0x12.0x0.33	1.0	210	C-3	1	BRA
DDYR-CHPAN-102	210	7.0x12.0x0.33	1.0	210	C-3	1	BRA

TABLE 4-3 HAZARDOUS WASTE SECONDARY CONTAINMENT SUMPS SYSTEMS

Sump I.D. Number[1]	Maximum Allowable Sump Capacity (gallons)	Dimensions of Sump (feet)	Secondary Containment Volume (gallons)	Location Reference		
				Drawing[2] Column-Row	Floor	Room[3]
MDB-SUMP-134	511	4.42x4.42x3.5	none required	J-8	1	TOX
MDB-SUMP-135	85	2.25x2.25x2.25	none required	H-7	1	SDS
PUB-SUMP-101	85	2.25x2.25x2.25	none required	D.5-3	1	BRA
PUB SUMP-102	85	2.25x2.25x2.25	none required	diked area	1	BRA out-side
SITE-SUMP-101	85	2.25x2.25x2.25	within vault	diked area		BRA

[1] MDB = Munition Demilitarization Building, PUB = Process Utility Building, OUT=outside,CHB=Container Handling Building

[2] Reference building column-row numbers from Drawings UM-1-G-504, -5, -6, -7, -8, -9, -10, and -11.

[3] TOX = Toxic Cubicle, SDS = Spent Decontamination Solution, area, BRA = Brine Reduction Area,

TABLE 4-4 SUMPS SYSTEM DESIGN STANDARDS

Sump And Trench[1] Design Standards	Sump Systems		
	Primary Containment Sumps[2]	Secondary Containment Sumps[3]	Toxic Cubicle Sumps[4]
PRIMARY CONTAINMENT:			
Construction Material:	welded carbon steel	welded carbon steel	welded carbon steel
Sump Capacity, gallons	89	89	512
Specified Shell Thickness, (inches)	3/16 steel	3/16 steel	3/16 steel
Dimensions, feet:	2.3 X 2.3 X 2.25	2.3 X 2.3 X 2.25	4.42 X 4.42 X 3.5
Grating, (inches)	reinforced fiberglass	reinforced fiberglass	reinforced fiberglass
Protective Coating	Chemically Resistant Durable Epoxy Coating	Chemically Resistant Durable Epoxy Coating	Chemically Resistant Durable Epoxy Coating
SECONDARY CONTAINMENT:			
Minimum Capacity, gallons	134	not applicable	512 required
Corrosion Liner Material	concrete	not applicable	concrete
Liner Thickness	6 inch		6 inch
Protective Coating	Chemically Resistant Durable Epoxy Coating	Chemically Resistant Durable Epoxy Coating	Chemically Resistant Durable Epoxy Coating
LEAK DETECTION SYSTEM:			
	Visually inspect and by level detector	not applicable	Visually inspect and by level detector

[1]Standards apply to trenches (for sump collection system designed with trench).

[2]MDB-SUMP-101 through MDB-SUMP-133

[3]MDB-SUMP-135, PUB-SUMP-101, -102, SITE-SUMP-101 and CHB-SUMP-101, -102 and -103.

[4]MDB-SUMP-134 (Toxic Cubicle Sump.)

All federal Title 40 CFR citations are Oregon rule as adopted by OAR 340-100-002

MODULE V - MISCELLANEOUS TREATMENT UNITS

This module describes the miscellaneous treatment units (regulated under Part 264 Subpart X) at the Umatilla Chemical Agent Disposal Facility. Six miscellaneous treatment units are located in the Brine Reduction Area (BRA) of the UMCDF site. These six treatment units are: three evaporator packages (each evaporator package consists of one flash evaporator (BRA-EVAP-101, BRA-EVAP-102, BRA-EVAP-201) and one heat exchanger (BRA-EXCH-101, BRA-EXCH-102, BRA-EXCH-201) and three drum dryers (BRA-DDRY-101, BRA-DDRY-102, BRA-DDRY-201). The Brine Reduction Area miscellaneous treatment units listed above have two major treatment objectives: (1) reducing the brines and wastewaters, from the pollution abatement system, being processed by at least 80% by weight and (2) assuring that the brine salt residues have no free liquids as determined by EPA Method 9095 (Permit Filter Liquid Test).

Within the first 720 hours of operation, the shakedown period, a performance test shall be conducted to verify that the treatment objectives are being met. During the shakedown, performance test, post-performance test and normal operation period, the Permittee shall operate according to the parameters set forth in this module. The parameters in this module shall be modified after the performance test to reflect any changes necessitated by the performance test.

V.A. REQUIREMENTS FOR MISCELLANEOUS TREATMENT UNITS LOCATED IN THE BRINE REDUCTION AREA

V.A.1. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

i. Subject to the terms of this permit, the Permittee shall treat only brines from the Brine Surge Tanks in the miscellaneous treatment units identified in Table 5-1 of this permit during Shakedown Periods I and II, Surrogate and Chemical Agent Trial Burn Periods and during the Post-Trial Burn Periods detailed in Module VI of this permit.

ii. Subject to the terms of this permit, the Permittee shall treat only brines from the Brine Surge Tanks in the miscellaneous treatment units identified in Table 5-1 of this permit during normal operations detailed in Module VII of this permit.

V.A.2. MISCELLANEOUS TREATMENT UNIT DESIGN, CONSTRUCTION AND MAINTENANCE

i. The Permittee shall design and construct the Brine Drum Dryers (BRA-DDYR-101, BRA-DDYR-102 and BRA-DDYR-201) as specified in Table D-9-3 of Volume II, Section D-9 of the Application; all applicable drawings in Volume II, Section D-9 and Volume V, Attachment D-3 of the Application; and the applicable design specifications in Volume VI, Attachment D-3, Section D-4B-04 of the Application.

ii. The Permittee shall design and construct the Brine Exchangers (BRA-EXCH-101, BRA-EXCH-102 and BRA-EXCH-201), the Brine Evaporators (BRA-EVAP-101, BRA-EVAP-102 and BRA-EVAP-201), and subsequent ancillary equipment as specified in Tables D-9-1 and D-9-2; all applicable drawings in Volume II, Section D-9 and Volume V, Section D-3 of the Application; and the applicable design specifications in Volume VI, Attachment D-3, Section D-4B-05 of the Application.

iii. All process monitors required, pursuant to permit condition V.A.9., shall be equipped with alarms operated to warn of deviation, or imminent deviation, from the limits specified in Tables 5-4 and 5-5 of this permit.

iv. Modifications to the design plans and specifications in the Application for any miscellaneous treatment unit shall be allowed only in accordance with permit condition II.A.2.

v. Prior to treatment of hazardous waste in the miscellaneous treatment units, the Permittee shall install and test all process monitoring and control instrumentation specified in Table 5-4 of this permit for the miscellaneous treatment units in accordance with the design plans in Volume II, Section D-9 and Volume VI, Attachment D-3, Sections D-4B of the Application.

vi. The Permittee shall design and construct the secondary containment sump systems identified in Table 5-2 as specified in Table 5-3 of this permit, and, the applicable design specifications in Volume VI, Attachment D-3, Section D-4B of the Application and Volume II, Section D-4.

V.A.3. MISCELLANEOUS TREATMENT UNIT INSTALLATION

i. The Permittee shall install the BRA Drum Dryers (BRA-DDRY-101, BRA-DDRY-102 and BRA-DDRY-201) in accordance with the installation specifications in Volume VI, Attachment D-3, Section D-4B-04 of the Application.

ii. The Permittee shall install the BRA Evaporators (BRA-EVAP-101, BRA-EVAP-102 and BRA-EVAP-201) and the BRA Exchangers (BRA-EXCH-101, BRA-EXCH-102 and BRA-EXCH-201) in accordance with the installation specifications in Volume VI, Attachment D-3, Section D-4B-05 of the Application.

iii. The Permittee shall not install any altered miscellaneous treatment unit until such time that the Department has:

a. Received certification from an independent, registered professional engineer, that attests to the structural integrity and the suitability of the altered miscellaneous treatment unit for handling the specified hazardous waste; [40 CFR §§264.601, 264.602 and 40 CFR §270.32(b)(2)]

b. Approved the design and specifications of the altered miscellaneous treatment unit; and

c. Received and approved a permit modification in accordance with 40 CFR §270.42.

iv. The Permittee shall obtain and submit to the Department within thirty (30) days of completing installation of each miscellaneous treatment unit a written certification from an independent, qualified installation inspector or an independent, qualified, registered professional engineer attesting that proper installation procedures were used for each miscellaneous treatment unit listed in Table 5-1. The independent miscellaneous treatment unit installation and primary containment system inspections, and subsequent written certifications, shall consider, but not be limited to, the following miscellaneous treatment unit installation documentation:

a. Field installation report with date of installation;

b. Approved welding procedures;

c. Welder qualifications and certifications;

d. Hydro-test reports in accordance with the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section VIII, Division 1;

e. Tester credentials;

f. Field inspector credentials;

g. Field inspection reports;

h. Field waiver reports; and

i. Non-compliance reports and corrective action (including field waiver reports) and repair reports.

v. The Permittee shall obtain and submit to the Department within thirty (30) days of completing installation of each miscellaneous treatment unit a written certification from an independent, qualified installation inspector or an independent, qualified, registered professional engineer attesting that proper installation procedures were used. The independent miscellaneous treatment unit installation certification documentation submitted to the Department for the BRA Drum Dryers (BRA-DDRY-101, BRA-DDRY-102, and BRA-DDRY-201) and the BRA Evaporator Packages (BRA-EVAP-101, BRA-EVAP-102, BRA-EVAP-201, BRA-EXCH-101, BRA-EXCH-102, and BRA-EXCH-201) shall include, but not be limited to, the following manufacturing design, fabrication, and testing documentation:

a. Shop drawings with dimensional and capacity data;

b. Vessel wall thickness and nozzle reinforcement calculations;

c. Vessel structural support calculations;

d. Approved welding procedures;

e. Welder qualifications/certifications;

f. Material reports and mill certifications;

g. Results of X-ray testing;

h. Tester credentials;

i. Non-compliance reports and corrective action;

j. Hydrotest reports;

k. ASME code data report;

l. Shop inspection reports; and

m. Shop inspector credentials.

vi. As specified in permit conditions V.A.3.i. through V.A.3.v., for each hazardous waste miscellaneous treatment unit identified in Table 5-1, the Permittee shall:

a. Maintain the installation documentation on file at the UCD Facility until such time that the miscellaneous treatment unit is certified closed in accordance with permit condition II.J.; and

b. At any time, provide the installation documentation by certified mail, express mail, or hand delivery to the Department within fifteen (15) days upon written request.

vii. Prior to operating a hazardous waste miscellaneous treatment unit, the Permittee shall comply with permit condition I.R. and permit conditions V.A.3.i. through V.A.3.vi.

V.A.4. PERFORMANCE TEST

i. The performance test plan shall be resubmitted by the Permittee as a permit modification at least 180 days prior to the proposed start date of the performance test. All applicable public comment periods and notifications as required by 40 CFR §264.601 and 40 CFR §270.62 shall be followed. [40 CFR §270.32(b)(2)]

ii. The Permittee shall conduct a performance test on the BRA in accordance with the revised performance test plan provided for in permit condition V.A.4.i. within the first 720 hours of operation of the BRA.

iii. The Permittee shall operate and monitor each miscellaneous unit during the performance test as specified in this permit and in the performance test plan.

iv. The revised performance test plan shall define operating conditions and waste feed rates that will be used to determine treatment effectiveness of the BRA. The performance test shall not begin until permit modifications have been approved by the Department.

v. The Permittee shall submit a summary of all data collected during the performance test to the Department upon completion of the performance test. All submissions shall be certified in accordance with 40 CFR §270.61(b)(7)(8)(9) and 10. The Permittee shall submit the following to the Department within 90 days of the completion of the performance test:

i. A complete performance test report.

ii. A submittal proposing operating conditions for post performance test and normal operating periods.

iii. A health risk assessment report completed pursuant to permit condition II.N.

vi. If the preliminary calculations show that one or more of the performance standards listed in this permit for the BRA were not met during the performance test, the Permittee shall immediately stop waste feed to the BRA. The Department shall be verbally notified within 24 hours of this discovery. As necessary, a revised post performance test feed rate may be submitted to the Department for approval that will allow the Permittee to dispose of the remaining hazardous wastes present in the tank systems.

vii. If the preliminary calculations for the performance tests, or testing results from any sampling pursuant to V.A.9., show that any emission rate for any constituent specified in V.A.5. is exceeded, then the Permittee shall notify the Department within 24 hours of the discovery. The Permittee should submit additional risk information to indicate that the increased emission is off-set by decreased emission from another constituent that is expected to be emitted at the same time. Based on the Notification and any additional information, the Director may submit in writing direction to the Permittee to stop waste feed to the BRA and/or appropriate incinerator(s) in the time specified in writing. Waste feed operation will resume upon written approval from the Department. [40 CFR §§270.32 (b)(2), 264.601 and 264.602]

V.A.5. PERFORMANCE STANDARDS

i. The particulate matter emissions from the BRA, corrected to 7% oxygen in accordance with the formula given below shall not exceed 34.3 mg/dscm (0.015 grains/dscf).(40 CFR §264.343 and 40 CFR §270.32(b)(2))

$$P_c = P_m \times 14/(21 - Y)$$

Where:
P_c = corrected concentration of particulate matter
P_m = measured concentration of particulate matter ppm (dry volume)
Y = measured O_2 concentration in the stack gas

ii. The following metal emission rates from the BRA shall not be exceeded: [40 CFR §§264.601, 266.106 and 270.32 (b)(2)]

Arsenic:	1.81E-05*	gms/sec	Antimony:	1.65E-05*	gms/sec
Barium:	1.40E-04*	gms/sec	Lead:	1.01E-04*	gms/sec
Chromium:	5.22E-05*	gms/sec	Mercury:	2.47E-05*	gms/sec
Beryllium:	1.65E-05*	gms/sec	Silver:	1.65E-05*	gms/sec
Cadmium:	2.22E-05*	gms/sec	Thallium:	3.30E-05*	gms/sec
Boron:	0.00E-00*	gms/sec	Cobalt:	1.65E-04*	gms/sec
Copper:	1.65E-04*	gms/sec	Manganese:	6.57E-05*	gms/sec
Nickel:	1.65E-04*	gms/sec	Phosphorus:	3.30E-04*	gms/sec
Selenium:	1.65E-05*	gms/sec	Tin:	3.30E-04*	gms/sec
Vanadium:	1.15E-04*	gms/sec	Zinc:	1.65E-04*	gms/sec

* May be modified due to results from performance test.

iii. The treatment effectiveness will be at least an 80 percent volume reduction, by weight, of the feed brine that produces a brine salt which contains no free liquids. The treatment effectiveness will be determined by the following:

a. Calculating a percent volume reduction, by weight, of the batch of brine by measuring moisture content in the brine salts. The percent volume reduction will be calculated by:

[(weight of batch processed) - (weight of salts produced by drum dryers) - (weight of particulate collected in dryer knockout box) - (weight of particulate collected from baghouses) - (weight of salts collected in catch pans) - (weight of salts collected in exhaust ducts) - (weight of liquids collected in catch pan) - (weight of wash water collected from rinsing equipment) - (weight of any leaks or spills)] /(weight of batch processed).

b. Brine salt that passes the paint filter liquids test (SW-846 Method 9095).

iv. The Permittee shall continuously monitor emissions of chemical agents from the BRA. The emission level shall not exceed the following concentrations [40 CFR §§264.601, and 270.32(b)(2)]:

	Chemical Agent - Concentration (mg/m^3)		
	VX	GB	HD
Maximum Instantaneous Stack Emission	0.0003	0.0003	0.03

v. The hydrogen chloride (HCL) emissions from the BRA shall not exceed 2.99E-03 grams/second. [40 CFR §§264.601, and 270.32(b)(2)]

vi. Compliance with the operating conditions specified in permit condition V.A.7. shall be regarded as compliance with the required performance standards identified in permit conditions V.A.5.i. through V.A.5.v. However, if it is determined that during the effective period of this permit that compliance with the operating permit conditions in V.A.7., is not sufficient to ensure compliance with the performance standards specified in permit conditions V.A.5.i. through V.A.5.v., the permit may be modified, revoked, or reissued, pursuant to 40 CFR §§270.41, 270.42, and OAR 340-105-041 and OAR 340-106-005.

V.A.6. LIMITATION ON WASTE FEED

i. The Permittee shall only feed brine to the BRA Evaporator Packages and/or Drum Dryers that is agent free as analyzed according to Attachment 2 of this permit.

ii. The feed rates of brine from a surge tank to the BRA Evaporator Packages and/or Drum Dryers shall not exceed 43,824 lbs/hr. The feedrates of metal and chlorine /chloride to the BRA Evaporator Packages and/or Drum Dryers shall not exceed the following limits:

METAL FEEDRATES

Arsenic:	1.02E-01 lbs/hr	Lead:	5.45E+00 lbs/hr
Chromium:	2.22E+00 lbs/hr	Mercury:	1.35E-02 lbs/hr
Thallium:	1.81E-02 lbs/hr	Manganese:	3.62E-02 lbs/hr

CHLORINE/CHLORIDE FEEDRATES

Hydrogen Chloride	1.64E-02 lbs/hr
Chlorine	0.00E+00 lbs/hr
Total Chlorine	1.64E-02 lbs/hr

* To be modified based on results of the performance test (see permit condition V.A.4)

V.A.7. OPERATING CONDITIONS

i. The Permittee shall operate the miscellaneous treatment units to maintain the system and process parameters within the ranges or setpoints specified in Table 5-4 of this permit.

ii. The Permittee shall operate the miscellaneous treatment units to automatically cut off and/or lock out the brine feed to the miscellaneous units when the monitored operating conditions deviate from the set points given in Table 5-5 of this permit.

iii. The Permittee shall not place hazardous wastes, treatment reagents, or other materials in the miscellaneous treatment unit(s) if they could cause the miscellaneous treatment unit(s) to rupture, leak, corrode, or otherwise fail.

iv. The Permittee shall operate the miscellaneous treatment units to prevent spills and overflows using the procedures and equipment described in Volume II, Section D-9 of the Application.

v. The Permittee shall operate the Brine Reduction Area Evaporator Package System (BRA-EVAP-101, BRA-EVAP-102, BRA-EVAP-201, BRA-EXCH-101, BRA-EXCH-102 and BRA-EXCH-201) as specified in Volume II, Section D-9 of the Application.

vi. The Permittee shall operate the Brine Reduction Area Drum Dryers (BRA-DDRY-101, BRA-DDRY-102 and BRA-DDRY-201) as specified in Volume II, Section D-9 of the Application.

vii. The Permittee shall prevent spills and overflows from the BRA Drum Dryers, the BRA Evaporator Packages, and the primary and secondary containment sump systems using the procedures and equipment described in Volume II, Section D-9 of the Application.

V.A.8. OPERATING PROCEDURES FOR SECONDARY CONTAINMENT SUMPS

i. The secondary containment sumps shall consist of all sumps listed in Table 5-2 of this permit.

ii. The Permittee shall operate the secondary containment sumps in accordance with Volume II, Section D-4 of the Application.

iii. The Permittee shall consider any materials or liquids detected in the secondary sumps or trenches to be a hazardous waste until the Permittee has sampled and analyzed the materials or liquids for TCLP metals and any other suspected hazardous waste or hazardous waste constituents, in accordance with the methods of the Waste Analysis Plan in Attachment 2 of this permit. The Permittee shall send those liquids that are determined to be hazardous waste to that Brine Surge Tank currently being filled. Materials or liquids that are determined through analysis to be non-hazardous must be evacuated from the sump in accordance with permit condition V.A.8.iv.

iv. The Permittee shall remove all materials or liquids in the secondary containment sumps by either a vacuum truck or dedicated sump pumps. The dedicated sump pump system may leave a residual liquid depth of no more than 3/4 inch. All sumps evacuated using a vacuum truck shall be pumped to a point where there is no free-standing liquid in the bottom of the sump.

v. Operation of the sump level indicators, interstitial probes and the condition of the sump liner shall be visually inspected per the inspection requirements and schedules in Attachment 3 of this permit. Testing of the ability of these indicators to detect liquids and the liner to contain liquids shall be conducted upon installation, annually, and between every chemical agent change as specified in Attachment 3 of this permit.

V.A.9. MONITORING REQUIREMENTS

i. Upon receipt of a written request from the Department, the Permittee shall perform sampling and analysis of the waste and exhaust emissions to verify that the operating requirements established in the permit achieve the performance standards delineated in this permit.

ii. All monitoring, recording, maintenance, calibration, and test data shall be recorded and the records for each miscellaneous treatment unit shall be placed in the operating record for each respective unit, in accordance with permit condition II.I.

iii. The Permittee shall maintain, calibrate, and operate process monitoring, control, and recording equipment as specified in Table 5-4 and 5-5 of this permit, while treating hazardous waste.

iv. Brine shall not be fed to the BRA Evaporator Packages or Drum Dryers if any of the monitoring instruments listed in Table 5-4 and 5-5 of this permit fails to operate properly.

V.A.10. WASTE FEED CUT OFF REQUIREMENTS

i. The Permittee shall operate the systems, specified in Table 5-5 of this permit, to automatically cutoff and or lockout the hazardous waste feed to the BRA Evaporator Packages and Drum Dryers when the monitored operating conditions deviate from the setpoints specified in Table 5-5 of this permit.

ii. In the event of a malfunction of the automatic waste feed cut off systems listed in Table 5-5 of this permit, the Permittee shall immediately cut off and/or lock out the waste feed manually, and perform staged shutdown of the BRA Evaporator Packages and Drum Dryers in accordance with the approved procedures specified in Volume II, Section D-9 and Volume VI, Attachment D-3, Sections D-4B-04 and D-4B-05 of the Application. The Permittee shall not restart the miscellaneous treatment unit until the problem causing the malfunction has been identified and corrected. Waste feed may not restart until the failed operating condition which caused the feed cutoff or lockout is/are restored to permit limits and all other parameters are within permit limits.

iii. The Permittee shall manually cut off and/or lock out the waste feed, and perform staged shutdown of the BRA, in accordance with the approved procedures specified in Volume II, Section D-9 of the Application, when the operating conditions deviate from the limits specified in permit condition V.A.7., unless the deviation automatically activates the waste feed cutoff and/or lockout sequence specified in permit condition V.A.10.i.

iv. If the number of automatic waste feed cut offs from an individual parameter on Table 5-5 for the BRA is activated greater than twice within any operating day, the Permittee shall be required to, at a minimum, verbally provide to the Department the information required in permit condition V.A.13.x. by the close of the following business day.

v. After any automatic waste feed cutoff, the Permittee shall be required to establish and maintain operating limits as specified in Table 5-5 for at least 15 minutes prior to restart of hazardous waste feed to the BRA.

vi. If any of the following automatic waste feed cutoffs from Table 5-5, for the BRA occur at a maximum frequency of five times per parameter within 30 BRA operating days in succession, the Permittee is required to verbally notify the Department of the occurrence and shall require Department approval before waste feed can resume in accordance with 40 CFR §270.32(b)(2): BRA 10, BRA 11, BRA 12, BRA 13, BRA 14, and BRA 15. These waste feed cutoffs, whether automatically or manually activated, are counted if the specified setpoints are deviated from while waste or waste residues continue to be processed in the incinerator chambers. A cascade event is counted at a frequency of one towards the first waste feed cutoff parameter specified on Table 5-5 which the setpoint is deviated from.

V.A.11. RESPONSE TO LEAKS OR SPILLS [40 CFR §270.32(b)(2)]

i. In the event of a leak or a spill from a hazardous waste miscellaneous treatment unit, the Permittee shall remove the unit from service immediately and complete the following actions:

a. Stop the flow of hazardous waste into the unit and inspect the unit to determine the cause of the release.

b. Remove the waste and accumulated precipitation from the unit within 24 hours of the detection of the leak, to prevent further release and allow inspection and repair of the unit. If the Permittee finds that it will be impossible to meet this time period, the Permittee shall notify the Department and demonstrate that a longer time period is required.

c. If the collected material is a hazardous waste, it shall be managed in accordance with all applicable requirements of 40 CFR Parts 262-264 and this permit.

d. Contain visible releases to the environment. The Permittee shall immediately conduct a visual inspection of all releases to the environment and, based on that inspection, shall: (1) prevent further migration of the leak or spill to soils or surface water; (2) remove and properly dispose of any visible contamination of the soil or surface water and (3) follow the actions dictated by the Contingency Plan in Volume X, Section G of the Application for the type of waste released.

e. Close the unit in accordance with the Closure Plan in Volume IX, Section I of the Application unless the following actions are taken:

(I) For a release caused by a spill that has not damaged the integrity of the unit, the Permittee shall remove the released waste and make any necessary repairs to fully restore the integrity of the unit before returning the miscellaneous treatment unit to service.

(II) For a release caused by a leak from the primary containment sump system to the secondary containment sump system, the Permittee shall repair the primary containment sump system prior to returning it to service.

(III) For a release to the environment caused by a leak from an aboveground portion of the ancillary equipment that does not have secondary containment, the Permittee shall repair the miscellaneous treatment unit or ancillary equipment before returning it to service.

(IV) If the Permittee replaces a component of the miscellaneous treatment unit to eliminate the leak, that component must satisfy the requirements for new miscellaneous treatment units or components in accordance with 40 CFR §264.601. (40 CFR §270.32(b)(2))

ii. For all major repairs to eliminate leaks or restore the integrity of the miscellaneous treatment unit, the Permittee shall obtain a certification by an independent, qualified, registered professional engineer that the repaired unit is capable of handling hazardous wastes without release for the intended life of the unit before returning the unit to service. Examples of major repairs are: Installation of an internal liner, repair of a ruptured unit; and repair or replacement of a secondary containment vault.

iii. The Permittee shall submit to the Department all certifications of major repairs to correct leaks within seven (7) calendar days from returning the hazardous waste miscellaneous treatment unit(s) to use.

V.A.12. INSPECTION SCHEDULES AND PROCEDURES

The Permittee shall inspect the hazardous waste miscellaneous treatment units, in accordance with the inspection schedules specified in Attachment 3 of this permit.

V.A.13. RECORDKEEPING AND REPORTING

i. The Permittee shall verbally report to the Department within twenty-four (24) hours of detection, when a leak or spill occurs from a hazardous waste miscellaneous treatment unit to the environment, in accordance with permit condition I.U.

ii. Releases from hazardous waste miscellaneous treatment units that are contained within a secondary containment system shall be reported as required in permit condition V.A.13.i. and shall be recorded in the Operating Record as required by permit condition II.I.1.i.

iii. In addition to complying with the requirements of permit condition I.U.2., within thirty (30) calendar days of detecting a release to the environment from a hazardous waste miscellaneous treatment unit, the Permittee shall submit a written report detailing, at a minimum, the following to the Department:

a. Likely route of migration of the release;

b. Characteristics of the surrounding soil (including soil composition, geology, hydrogeology, wind direction, and climate);

c. Results of any monitoring or sampling conducted in connection with the release. If the Permittee finds it will be impossible to meet the required 30 calendar day submittal period, the Permittee shall provide the Department with a schedule of when the results will be available. This schedule must be provided before the required thirty (30) calendar day submittal period expires;

d. Proximity of downgradient drinking water, surface water, and populated areas; and

e. Description of response actions taken or planned.

iv. The Permittee shall obtain, and keep on file at the UCD, the written statements by those persons required to certify the design and installation of the hazardous waste miscellaneous treatment units as specified in permit condition V.A.3., until such time that the miscellaneous treatment unit is certified closed in accordance with permit condition II.J.6.

v. The Permittee shall keep on file at the UCD, the written hazardous waste miscellaneous treatment unit assessments in accordance with 40 CFR §270.32 (b)(2)of each hazardous waste miscellaneous treatment unit's integrity and suitability for handling hazardous waste, until such time that the hazardous waste miscellaneous treatment unit is certified closed in accordance with permit condition II.J.6.

vi. The Permittee shall maintain at the UCD, a record of the results of leak tests and integrity tests conducted, in accordance with permit conditions V.A.3. or V.A.11.ii.

vii. In the event that a hazardous waste miscellaneous treatment unit exceeds the maximum allowable capacity designated for that unit in Table 5-1 of this permit, the Permittee shall document in the Operating Record, as required by permit condition II.I.1.i., the following information:

a. The date and time of occurrence;

b. Identify the unit by the identification number specified in Table 5-1 of this permit;

c. Indicate if any other available miscellaneous treatment unit within the system was available, and identify such unit by the unit identification number specified in Table 5-1 of this permit;

d. If no additional treatment capacity was available within the miscellaneous treatment unit system, indicate if the associated collection and/or treatment activities were automatically or manually cut off; and

e. Indicate if any associated BRA Surge Tank's or BRA Evaporator Package's automatic waste feed cutoff interlocks were required. Identify the required interlock and whether the interlocks were successfully activated.

viii. The Permittee shall document and record the results of each miscellaneous treatment unit's waste analysis required by Attachment 2 of this permit.

ix. The Permittee shall record and maintain in the Operating Record for each miscellaneous treatment unit all monitoring and inspection data compiled under the permit conditions, in accordance with permit condition II.I.1.i.

x. The Permittee shall record in the Operating Record the date, time, and duration of all automatic waste feed cutoffs and/or lockouts, including the triggering parameters, reason for the deviation, and corrective measures taken to prevent recurrence of the incident. The Permittee shall also record all incidents of the automatic waste feed cutoff function failures, including the corrective measures taken to correct the condition that caused the failure.

V.A.14. CLOSURE

i. The Permittee shall close the miscellaneous treatment units listed in Table 5-1 of this permit in accordance with the Closure Plan in Volume IX, Section I of the Application.

ii. If the Permittee demonstrates that not all contaminated soils can be practically removed or decontaminated during the closure period, the Permittee shall comply with the permit conditions II.J.8. and II.J.9.

V.A.15. SPECIAL PROVISIONS FOR IGNITABLE OR REACTIVE WASTES

The Permittee shall not place ignitable or reactive waste in the miscellaneous treatment units or in the secondary containment systems listed in Tables 5-1 and 5-2 of this permit.

V.A.16. SPECIAL PROVISIONS FOR INCOMPATIBLE WASTES

i. The Permittee shall not place hazardous wastes in a miscellaneous treatment unit that has not been decontaminated and that previously held brine from a different chemical agent and/or incompatible material.

ii. During any one chemical agent campaign, the permittee shall only place in the miscellaneous treatment units the brine from one type of agent (e.g., GB, VX, and HD) specified for the particular campaign.

iii. Prior to initiating a campaign with a new chemical agent, the Permittee shall triple rinse the miscellaneous treatment units and their associated piping and ancillary equipment identified in Table 5-1 of this permit with the appropriate decontamination solution to remove brine residuals.

iv. The Permittee shall collect the decontamination solution generated in permit condition V.A.16.iii. in the BRA Surge Tank.

TABLE 5-1

Hazardous Waste Miscellaneous Treatment Units Permitted for Use During Shakedown Periods I and II,

Surrogate and Chemical Agent Trial Burns, Post Trial Burn Periods and Normal Chemical Agent Operations

Unit I.D. Number	Maximum Allowable Capacity (gallons)	Dimensions of Unit (feet)	Permitted Hazardous Waste Activity	Permitted Hazardous Waste Codes[1,2]
BRA-DDRY-101	N/A	3.5' dia. X 12.0' drum length	Dehydration of brine from BRA Evaporator Packages	TC Metals (D004-D011) D001 to D011, D022, D028, D030 and D043 Perchloroethylene-U210, D039, Monochlorobenzene-U037, Trichloroethane-U226, and Residues of Treatment-F998,F999
BRA-DDRY-102	N/A	3.5' dia. X 12.0' drum length	Dehydration of brine from BRA Evaporator Packages	TC Metals (D004-D011) D001 to D011, D022, D028, D030 and D043 Perchloroethylene-U210, D039, Monochlorobenzene-U037, Trichloroethane-U226, and Residues of Treatment-F998,F999

[1] TC Organics are presumed to be absent due to successful incineration to below regulatory levels under the TC rule, but sampling and analysis will be conducted to verify their absence in the Brine Surge Tank according to the Waste Analysis Plan included as Attachment 2 of this permit.
[2] TC = Toxicity Characteristic

TABLE 5-1 (Continued)

Hazardous Waste Miscellaneous Treatment Units Permitted for Use During Shakedown Periods I and II,

Surrogate and Chemical Agent Trial Burns, Post Trial Burn Periods and Normal Chemical Agent Operations

Unit I.D. Number	Maximum Allowable Capacity (gallons)	Dimensions of Unit (feet)	Permitted Hazardous Waste Activity	Permitted Hazardous Waste Codes[1,2]
BRA-DDRY-201	N/A	3.5' dia. X 12.0' drum length	Dehydration of brine from BRA Evaporator Packages	TC Metals (D004-D011) D001 to D011, D022, D028, D030 and D043 Perchloroethylene-U210, D039, Monochlorobenzene-U037, Trichloroethane-U226, and Residues of Treatment-F998,F999
BRA-EVAP-101	1,060 gallons shut-in maximum	4.5' dia. by 8.0' length (not including bottom cone)	Increase the specific gravity of the brine from the Brine Surge Tanks	TC Metals (D004-D011) D001 to D011, D022, D028, D030 and D043 Perchloroethylene-U210, D039, Monochlorobenzene-U037, Trichloroethane-U226, and Residues of Treatment-F998,F999
BRA-EVAP-102	1,060 gallons shut-in maximum	4.5' dia. by 8.0' length (not including bottom cone)	Increase the specific gravity of the brine from the Brine Surge Tanks	TC Metals (D004-D011) D001 to D011, D022, D028, D030 and D043 Perchloroethylene-U210, D039, Monochlorobenzene-U037, Trichloroethane-U226, and Residues of Treatment-F998,F999

TABLE 5-1 (Continued)

Hazardous Waste Miscellaneous Treatment Units Permitted for Use During Shakedown Periods I and II,

Surrogate and Chemical Agent Trial Burns, Post Trial Burn Periods and Normal Chemical Agent Operations

Unit I.D. Number	Maximum Allowable Capacity (gallons)	Dimensions of Unit (feet)	Permitted Hazardous Waste Activity	Permitted Hazardous Waste Codes[1,2]
BRA-EVAP-201	1,060 gallons shut-in maximum	4.5′ dia. by 8.0′ length (not including bottom cone)	Increase the specific gravity of the brine from the Brine Surge Tanks	TC Metals (D004-D011) D001 to D011, D022, D028, D030 and D043 Perchloroethylene-U210, D039, Monochlorobenzene-U037, Trichloroethane-U226, and Residues of Treatment-F998,F999
BRA-EXCH-101	950 gallons/min. maximum recirculation rate	1,300 square feet of heat transfer area	Raise the temperature of the brine from the Brine Surge Tanks	TC Metals (D004-D011) D001 to D011, D022, D028, D030 and D043 Perchloroethylene-U210, D039, Monochlorobenzene-U037, Trichloroethane-U226, and Residues of Treatment-F998,F999

[1] TC Organics are presumed to be absent due to successful incineration to below regulatory levels under the TC rule, but sampling and analysis will be conducted to verify their absence in the Brine Surge Tank according to the Waste Analysis Plan included as Attachment 2 of this permit.
[2] TC = Toxicity Characteristic

TABLE 5-1 (Continued)

Hazardous Waste Miscellaneous Treatment Units Permitted for Use During Shakedown Periods I and II,

Surrogate and Chemical Agent Trial Burns, Post Trial Burn Periods and Normal Chemical Agent Operations

Unit I.D. Number	Maximum Allowable Capacity(gallons)	Dimensions of Unit (feet)	Permitted Hazardous Waste Activity	Permitted Hazardous Waste Codes[1,2]
BRA-EXCH-102	950 gallons/min. maximum recirculation rate	1,300 square feet of heat transfer area	Raise the temperature of the brine from the Brine Surge Tanks	TC Metals (D004-D011) D001 to D011, D022, D028, D030 and D043 Perchloroethylene-U210, D039, Monochlorobenzene-U037, Trichloroethane-U226, and Residues of Treatment-F998,F999
BRA-EXCH-201	950 gallons/min. maximum recirculation rate	1,300 square feet of heat transfer area	Raise the temperature of the brine from the Brine Surge Tanks	TC Metals (D004-D011) D001 to D011, D022, D028, D030 and D043 Perchloroethylene-U210, D039, Monochlorobenzene-U037, Trichloroethane-U226, and Residues of Treatment-F998,F999

[1] TC Organics are presumed to be absent due to successful incineration to below regulatory levels under the TC rule, but sampling and analysis will be conducted to verify their absence in the Brine Surge Tank according to the Waste Analysis Plan included as Attachment 2 of this permit.
[2] TC = Toxicity Characteristic

TABLE 5-2

HAZARDOUS WASTE SECONDARY CONTAINMENT SUMP SYSTEMS

Sump I.D Number	Maximum Allowable Capacity (gallons)	Dimensions of Sump (feet)	Location Reference		
			Drawing[1] Column - Row	Floor	Room
BRA-SUMP-101	89	4.42x4.42x3.5	C-3	1	BRA

[1] Reference building column-row numbers from Drawings UM-2-D-503 in Volume V, Section D-3 Drawings of the Application.

TABLE 5-3

SECONDARY CONTAINMENT SUMP SYSTEM

DESIGN STANDARDS

Sump Design Standards	Secondary Containment Sumps
PRIMARY LINER:	
Construction Material:	welded carbon steel
Sump Liner Capacity, (gallons)	89
Specified Shell Thickness, (inches)	3/16 steel
Grating Material	reinforced fiberglass
Dimensions, feet:	2.3 X 2.3 X 2.25
Protective Coating:	Chemically Resistant Durable Epoxy Coating
LEAK DETECTION SYSTEM:	
Inspection Procedures:	Visual inspection

TABLE 5-4 BRINE REDUCTION AREA INSTRUMENT AND PROCESS DATA

Item No.	Control Parameter	Measuring Device	Location	Instrument Range	Range or Setpoint	Accuracy	Calibration Method No. and Frequency[4]
1	Brine Feed: Brine Flow Rate to Evap. Pack. BRA-EVAP-101/102/201 FI-837/FI-442/FI-835	Electro-magnetic Flowmeter	In-Line	0-50 gpm	13-23 gpm	±0.5 % of Range	Inst. Calib. Para. 2.3
2	Heat Exchangers: BRA-EVAP 101B/102B/201B Brine Temp. TR-832/TR-432/TR-890	Thermocouple	In-Line	0-500°F	210-240°F	±0.375% of Range	Inst. Calib. Para. 2.4
3	Heat Exchanger: BRA-EVAP-101B/102B/201B Brine Density DE-834/DE-434/DE-887	Magnetically Vibrated Tube	Heat Exchanger	0.5-1.5	1.08-1.25	±2% of Range	Inst. Calib. Para. 1.1 and 1.2
4	Heat Exchangers BRA-EVAP-101B/102B/201B Steam Entering: Flow Rate FIC-830/FIC-430/FIC-888	Orifice & D/P Cell	On-Line	0-20,000 lb/hr	0-9,600 lb/hr	±0.5% of Span	Inst. Calib. Para. 2.3
5	Heat Exchangers BRA-EVAP-101B/102B/201B Steam Entering: Temperature (High Alarm) TAH-919/TAH-419/TAH-724	Thermocouple	In-Line	0-500°F	260-300°F	±0.375% of Range	Inst. Calib. Para. 2.4

Item No.	Control Parameter	Measuring Device	Location	Instrument Range	Range or Setpoint	Accuracy	Calibration Method No. and Frequency[4]
6	Flash Evaporators: BRA-EVAP 101A/102A/201A Level LIT-757/LIT-454/LIT-720 High/Low Level Alarm	D/P Cell	Flash Chamber	0-72 in.	48 in.	±0.25% of Span	Inst. Calib. Para. 2.2
7	Drum Dryers: BRA-DDYR-101/102/201 Brine Flow Rate to Drum Dryer FI-851/FI-872/FI-903	Electro-magnetic Flowmeter	In-Line	0-10 gpm	5.3 gpm	±0.5% of Span	Inst. Calib. Para. 2.3
8	Drum Dryers: BRA-DDYR-101/102/201 Temp. of Brine to Drum Dryer TAH-110	Thermocouple	In-Line	0-500°F	210-240°F	±0.375% of Range	Inst. Calib. Para. 2.3
9	Drum Dryers: BRA-DDYR-101/ 102 Liquid Level in Nip LIC-758/LIC-759/LIC-760	D/P Cell	Vessel	0-36 in.	0-18 in.	±0.5% of Span	Inst. Calib. Para. 2.3
10	Drum Dryers: BRA-DDYR-101/102/201 Speed of Drum Drive Motors SIC-854/SIC-875/SIC-906	Transmitter	Drum Drive Motor	1-20 rpm	1-12 rpm	±1% of Range	Inst. Calib. Para. 2.3
11	Drum Dryers - BRA-DDYR-101/102/201 Steam Entering: Flow Rate FI-847/FI-868/FI-899	Orifice & D/P Cell	In-Line	0-10,000 lb/hr	0-3,400 lb/hr	±0.5% of Span	Inst. Calib. Para. 2.3

Item No.	Control Parameter	Measuring Device	Location	Instrument Range	Range or Setpoint	Accuracy	Calibration Method No. and Frequency[2]
12	BRA PAS: Dryer BRA-SEPA-105 Knockout Box - Temp. of Heater TIC-190	Thermocouple	Vessel	0-1,000°F	350°F	±0.375% of Span	Inst. Calib. Para. 2.4
13	BRA PAS: Burner BRA-BURN-110 - Operation (online/ offline) BE-170	Transmitter	Burner	N/A	N/A	N/A	N/A
14	BRA PAS: Burner BRA-BURN-110 - Fuel Gas Flow FO-305	Orifice Plate & D/P Cell	In-Line	0-12,000 scfh	10,000 scfh	±3% of Full Scale	Inst. Calib. Para. 2.3
15	BRA PAS: Baghouses BRA-SEPA-101/102/103/ 104 - Air Stream Temp. (Inlet) TI-172	Thermocouple	In-Line	0-1,000°F	200-400°F	±0.375% of Range	Inst. Calib. Para. 2.4
16	BRA PAS: Baghouses BRA-SEPA-101/102/103/ 104 - Pressure Differential across Bags PDI-143/PDI-144/PDI-145/ PDI-186	D/P Cell	Vessel	0-10 in. w.c.	1-7 in. w.c.	±0.25% of Range	Inst. Calib. Para. 2.3
17	BRA PAS: BRA-STAK-102 Exhaust Stack - Flow Rate FI-151	Orifice & D/P Cell	Stack	0-20,000 acfm	11,000 acfm	±0.5% of Span	Inst. Calib. Para. 2.4
18	Evaporator: Brine Temp. TISH-110	Thermocouple	Evaporator	0-500°F	212°F	±0.375% of Range	Inst. Calib. Para. 2.3

Item No.	Control Parameter	Measuring Device	Location	Instrument Range	Range or Setpoint	Accuracy	Calibration Method No. and Frequency[a]
19	Level Switch in Baghouse LAH-94/LAH-95/LAH-96/LAH96/ LAH-97	Float	Baghouse	N/A	72 in.	N/A	Inst. Calib. Para. 2.2
20	BRA Stack Exhaust gas chemical agent MON ACAM 152	Gas Chromatography	Stack	Attachment D-2	Attachment D-2	± 1% Repeatability	Attachment D-2

NOTES:

[a] See Attachment D-1 for "Process Instrument Calibration," "Oxygen and Carbon Monoxide Analyzer Calibration," and "Quality Assurance/Quality Control Data Forms." See also Operating and QA/QC procedures found in "Laboratory Quality Assurance Program for the Chemical Stockpile Disposal Program, November 1988" and Attachment D-1, "Stack Gas Sample Conditioning System." Additional operating and QA/QC procedures for the Automatic Continuous Air Monitoring System (Item No. 20 above) are in Attachment D-2 and Attachment F-1.

[b] D/P = differential pressure N/A = not applicable

TABLE 5-5
MISCELLANEOUS TREATMENT UNITS WASTE FEED CUTOFF/LOCKOUT PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints
BRA 1		Agent Concentration in brine going into the evaporator	Agent free as analyzed according to Attachment 2 of this permit
BRA 2		Brine pH going into evaporator high	10.0
BRA 3		Brine pH going into evaporator low	5.5
BRA 4		Brine specific gravity going into evaporator high	1.25
BRA 5		Brine specific gravity going into evaporator low	1.00
BRA 6		Toxicity Organics concentration in brine going into the evaporator	Less than TC limits or non-detectable
BRA 7		Brine specific gravity going into drum dryer high	1.25
BRA 8		Brine specific gravity going into drum dryer low	1.08
BRA 9	TAH-110	Brine temperature into the drum dryer high	250 °F
BRA 10	FIT-42 FIT-43 FIT-44	Total brine feed rate to the three drum dryers high	43824 lbs/hr. to be adjusted periodically or as necessary to comply with final metals and chlorine limitations

Item Number	Tag Number	Process Data Description	Setpoints
BRA 11	TAH-172	Temperature of flue gas into baghouse high	400 °F
BRA 12	PDAHH-143 PDAHH-144 PDAHH-145 PDAHH-186	Differential pressure of the baghouse high-high	7 in. w.c.
BRA 13	PDT-143 PDT-144 PDT-145 PDT-186	Differential pressure of the baghouse low	1 in. w.c.
BRA 14	BSLL-170	Loss of burner flame	Flame loss
BRA-15	ACAM-152	Chemical Agent emission high-high based on instantaneous measurement in BRA stack	0.0003 mg/m^3 GB 0.03 mg/m^3 HD 0.0003 mg/m^3 VX

MODULE VI - SHORT TERM INCINERATION - SHAKEDOWN, TRIAL-BURN AND POST TRIAL-BURN

This module covers the incinerator shakedown, trial burn and post-trial burn periods for each incinerator. For clarity, this module is organized as follows:

Section VI.A. - General Conditions Applicable to All UMCDF Incinerators
Section VI.B. - Liquid Incinerators (LICs)
Section VI.C. - Metal Parts Furnace (MPF)
Section VI.D. - Deactivation Furnace System (DFS)
Section VI.E. - Dunnage Incinerator (DUN)
Section VI.F. - Combined Stack for the LICs, MPF and DFS

VI.A. GENERAL CONDITIONS DURING SHAKEDOWN, TRIAL-BURN AND POST TRIAL-BURN FOR ALL INCINERATORS AT THE UMCDF SITE

VI.A.1. CONSTRUCTION AND MAINTENANCE [40 CFR §264.31]

i. The Permittee shall construct each incinerator in accordance with the design plans and specifications contained in Volume II, Sections D-5 through D-8 and Volume VII, Attachment D-3, Sections D-5b through D-8b of the Application.

ii. All process monitors required, pursuant to permit conditions VI.B.4., VI.C.4, VI.D.4. and VI.E.4., shall be equipped with operational alarms to warn of deviation, or imminent deviation, from the limits specified in Tables 6-3, 6-7, 6-11, 6-15, 7-1, 7-3, 7-5 and 7-7 of this permit.

iii. Modifications to the design plans and specifications in the Application for any incinerator shall be allowed only in accordance with permit condition II.A.2.

iv. Prior to treating surrogate or chemical agent hazardous waste in any incinerator, the Permittee shall install and test all process monitoring and control instrumentation specified in Tables 7-1, 7-3, 7-5 and 7-7 of this permit for the incinerators in accordance with the design plans in Volume II, Sections D-5 through D-8 and Volume VII, Attachment D-3, Sections D-5b through D-8b of the Application.

v. The Permittee shall not feed surrogate or chemical agent hazardous wastes into any incinerator until such time that the Permittee has demonstrated compliance with the certification of construction or modification requirements, as specified in permit condition I.R.

vi. The Permittee shall maintain and operate each incinerator during shakedown, trial burn and post-trial burn periods in accordance with the operating requirements specified in this permit. Each incinerator shall meet the applicable performance standards specified in permit conditions VI.B.1., VI.C.1., VI.D.1., and VI.E.1. before entering each incinerator's carbon filter system.

vii. All air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants and to minimize process upsets. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants and process upsets shall be established.

VI.A.2. INSPECTION REQUIREMENTS [40 CFR §264.347]

i. The Permittee shall inspect each incinerator in accordance with the inspection schedules and requirements in Attachment 3 of this permit.

ii. The inspection data for each incinerator shall be recorded, and the records shall be placed in the operating record for the respective incinerator, in accordance with permit condition II.I.

VI.A.3. MONITORING REQUIREMENTS [40 CFR §264.37]

i. Upon receipt of a written request from the Department, the Permittee shall perform sampling and analysis of the waste and exhaust emissions to verify that the operating requirements established in the permit achieve the performance standards delineated in this permit. [40 CFR §264.347(a)(3)]

ii. All monitoring, recording, maintenance, calibration and test data shall be recorded and the records for each incinerator shall be placed in the operating record for each respective incinerator, in accordance with permit condition II.I.

VI.A.4. RECORDKEEPING

i. The Permittee shall record and maintain in the operating record for each incinerator, all monitoring and inspection data compiled under the conditions of this permit, in accordance with permit condition II.I.

ii. The Permittee shall record in the operating record the date, time, and duration of all automatic waste feed cutoffs and/or lockouts, including the triggering parameters, reason for the deviation, and corrective measures taken to prevent recurrence of the incident. The Permittee shall also record all incidents of the automatic waste feed cutoff function failures, including the corrective measures taken to correct the condition that caused the failure. [40 CFR §264.347 and §264.345]

iii. A quarterly report, as defined below, will be submitted to the Department each calendar quarter within 30 days following the end of the quarter. The report will include the following information:

a. Total operating time for each incinerator;

b. Date/Time of all startups and shutdowns;

c. Date/Time/Duration/Cause/Corrective Action taken for all shutdowns caused by malfunction of either process or control equipment;

d. Date/Time/Duration/Cause/Corrective Action taken for all instances of waste feed cutoff.

VI.A.5. TRIAL BURN PLAN AND DATA SUBMISSION

i. The Permittee shall operate and monitor each incinerator during the short-term periods (shakedown, trial-burn, and post trial-burn) as specified in Module VI of this permit and in the trial burn plans for surrogate and each different chemical agent. [40 CFR §270.62]

ii. The individual trial burn plan for surrogate and each different chemical agent for each incinerator shall be resubmitted by the Permittee as a permit modification at least 180 days prior to the start date of the shakedown period for each trial burn. All applicable public comment periods and notifications as required by 40 CFR §270.42 shall be followed.

iii. The revised trial burn plans shall follow the procedures listed below:

a. The revised trial burn plans for the surrogate and each different chemical agent trial burn for each incinerator shall define operating conditions and waste feed rates that will be used to determine incinerator performance in accordance with 40 CFR §264.343.

b. The revised trial burn plans shall also include ramp up procedures during the shakedown periods.

c. The revised trial burn plans shall also address stack sampling for total organics in accordance with EPA Document "Guidance For Total Organics Final Report," March 1996 EPA-600-R-96-036. The revised trial burn plans shall also include Total Organic Carbon (TOC) monitoring.

e. Shakedown Periods I and II shall not begin until permit modifications in accordance with VI.A.5.ii have been approved by the Department.

iv. The Permittee may not start Shakedown Period II in any incinerator system until the Department has approved in writing both the surrogate trial burn test data and the specific chemical agent trial burn plan for that incinerator system.

v. The Permittee shall submit a summary of all data collected during the trial burn to the Department upon completion of each trial burn period. The Permittee shall submit to the Department a trial burn test report within 90 calendar days of completion of each trial burn. All submissions shall be certified in accordance with 40 CFR §§270.62(b)(7),(8)and(9).

vi. If the preliminary calculations show that one or more of the performance standards listed in this permit for the respective incinerator were not met during the trial burn, the Permittee shall immediately stop waste feed to the incinerator system. The Department shall be verbally notified within 24 hours of this discovery. As necessary, a revised post trial burn feed rate may be submitted to the Department for approval in writing, that will allow the Permittee to dispose of the remaining hazardous wastes present in the tank systems.

vii. If the preliminary calculations for any trial burn, or testing results from any sampling pursuant to VI.A.3.i., show that any emission rate for any constituent, for any incinerator listed in Table 6-16 is exceeded, then the Permittee shall notify the Department within 24 hours of the discovery. The Permittee should submit additional risk information to indicate that the increased emission is off-set by decreased emission from another constituent that is expected to be emitted at the same time. Based on the notification and any additional information, the Director may submit in writing direction to the Permittee to stop waste feed to the appropriate incinerator(s). The Permittee shall stop waste feed to the appropriate incinerator(s) in the time specified in writing. Waste feed operation will resume upon written approval from the Department. [40 CFR 270.32(b)(2)]

VI.A.6. SHAKEDOWN

i. Shakedown Periods I and II for each incinerator shall be conducted in accordance with the approved trial burn plans provided for in permit condition VI.A.5.

ii. Shakedown Period I for each incinerator shall begin with the initial introduction of surrogate into the furnace system following construction and shall end with the start of the surrogate trial burn.

iii. Shakedown Period II for each incinerator shall begin with the introduction of chemical agent into the incinerator system and shall end with the start of the chemical agent trial burn. There shall be a separate Shakedown Period II for each chemical agent for each incinerator.

iv. Each shakedown period shall not exceed 720 operating hours. The Permittee may petition the Department for one extension of any shakedown period for up to 720 additional operational hours for the surrogate test or chemical agent tests in accordance with 40 CFR §270.62(a).

VI.A.7. SHUTDOWN

After the completion of the surrogate post trial burn period, the Permittee shall complete the shutdown procedure in the approved trial burn plan prior to resumption of the non-hazardous waste simulant testing in each incinerator system. After the shutdown is complete, daily inspections of the respective incinerator and tank systems used in the surrogate trial burn will not be required until hazardous wastes are re-introduced into the equipment.

VI.A.8. REPORTING

i. During the shakedown, trial burn and post-trial burn periods, the Permittee shall calibrate the oxygen (O_2) and carbon monoxide (CO) continuous emission monitors (CEMS) specified in this permit in accordance with the Performance Specifications for Continuous Emission Monitoring Systems referenced by Part 266 APPENDIX IX.

ii. During the shakedown, trial burn and post-trial burn periods, the Permittee shall submit a report of all quarterly CEM Calibration Error and annual CEM Performance Specification Tests conducted in accordance with Condition VI.A.8.i. of this permit within 30 calendar days of the date of the tests.

VI.B. LIQUID INCINERATORS (LICs)

VI.B.1. PERFORMANCE STANDARDS

i. During the shakedown, trial burn and post-trial burn periods, each LIC must achieve a destruction and removal efficiency (DRE) of 99.9999% for the surrogate principal organic hazardous constituents (POHCs) and chemical agent listed below.

Surrogate POHCs	Chemical Agent
Perchloroethylene	GB, VX, and HD (Mustard), individually
Trichloroethane	
Monochlorobenzene	

The DRE shall be calculated by the method specified in 40 CFR §264.343(a)(1).

ii. During the shakedown, trial burn and post-trial burn periods, the particulate matter emission from the common stack, corrected to 7% oxygen in accordance with the formula given below [40 CFR §264.343 and 40 CFR §270.32(b)(2)], shall not exceed 34.3 mg/dscm (0.015 grains/dscf).

$$P_c = P_m \times 14/(21 - Y)$$

Where: P_c = corrected concentration of particulate matter
P_m = measured concentration of particulate matter
Y = measured O_2 concentration in the stack gas

iii. The hydrogen chloride (HCl) emission from the combined LICs shall not exceed 3.81×10^{-2} grams/second and neither LIC shall exceed 4 pounds/hour individually. [40 CFR §§264.343(b), 270.32(b)(2)]

iv. During the shakedown, trial burn, and post-trial burn periods, if the emission rates listed in Table 6-2 are exceeded, the Permittee shall notify the Department in accordance with permit condition VI.A.5.vii.

The emission limits shall be met by limiting feed rate of each metal into each LIC as specified in Table 6-1. [40 CFR §270.32(b)(2)]

v. If the Permittee submits a notification pursuant to permit condition VI.B.1.iv., the Director may submit in writing direction to the Permittee to stop waste feed to the LICs in accordance with permit condition VI.A.5.vii. Resumption of waste feed operations to the LICs shall be in accordance with permit condition VI.A.5.vii.

vi. During the shakedown, trial burn and post-trial burn periods, the Permittee shall control emissions of products of incomplete combustion (PICs) from the common stack such that the carbon monoxide (CO) level in the common stack, corrected to 7% oxygen in accordance with the formula given below, shall not exceed 100 parts per million (ppm), dry volume, over an hourly rolling average. [40 CFR §§264.347(a)(2), 270.32(b)(2)]

$$CO_c = CO_m \times (21 - 7)/(21 - O_m)$$

Where: CO_c = corrected CO ppm (dry volume)
CO_m = measured CO ppm (dry volume)
O_m = measured % O_2 (dry volume)

vii. During the shakedown, trial burn and post-trial burn periods, the Permittee shall continuously monitor emissions of chemical agents from each LIC. The emission level shall not exceed the following concentrations:

	Chemical Agent - Concentration (mg/m^3)		
	VX	GB	HD
Maximum Instantaneous Stack Emission	0.0003	0.0003	0.03

Non-compliance with these emission limits shall be considered a violation of this permit condition. [40 CFR §270.32(b)(2)]

viii. During the shakedown, trial burn, and post-trial burn periods, compliance with the operating conditions specified in permit condition VI.B.3, shall be regarded as compliance with the required performance standards identified in permit conditions VI.B.1.i through VI.B.1.vii. However, if it is determined that during the effective period of this permit that compliance with the operating conditions in permit condition VI.B.3 is not sufficient to ensure compliance with the performance standards specified in permit conditions VI.B.1.i through VI.B.1.vii, the permit may be modified, revoked, or reissued, pursuant to 40 CFR §270.41.[40 CFR §270.32(b)(2)]

VI.B.2. LIMITATION ON WASTE FEED[40 CFR 270.62(c)]

i. During the shakedown, trial burn, and post-trial burn periods, the Permittee shall incinerate only the hazardous wastes in Table 6-1 of this permit in each LIC, in compliance with the operating requirements specified in permit condition VI.B.3.

ii. After successful completion of the chemical agent trial burn the Permittee shall be authorized to commence hazardous waste feed to each LIC up to 50% of the maximum feed rates indicated in Table 6-1 of this permit and shall not deviate from the operating conditions specified in Tables 6-3 and 7-1 of this permit.

iii. After successful completion of the chemical agent trial burn, the Permittee shall be authorized to commence hazardous waste feed to each LIC up to 75% of the maximum feed rates indicated in Table 6-1 of this permit upon submittal and Departmental approval of a report in the format specified by the Department showing compliance with the performance standards in permit condition VI.B.1.

iv. After successful completion of the chemical agent trial burn, the Permittee shall be authorized to commence hazardous waste feed to each LIC up to 100% feed rates demonstrated during the previous trial burn for each LIC upon submittal and Departmental approval of the following:

1. A complete trial burn report.

2. A submittal proposing operating conditions for post trial burn and normal operating periods.

3. A health risk assessment report completed pursuant to permit condition II.N.

v. The Permittee shall not feed the following wastes to each LIC, during the shakedown period.

1. Acutely toxic hazardous wastes listed in 40 CFR §261.33(e).

2. RCRA Hazardous Wastes FO20 through FO23, FO26, and FO27.

3. Any waste containing chemical agents except during Shakedown II.

4. Any wastes containing polychlorinated biphenyl (PCBs).

vi. Decontamination solution and aqueous laboratory liquids may be fed to the secondary chamber of each LIC during Shakedown Period II only when the operating conditions as specified in section VI.B.3. of this permit are satisfied.

vii. During the trial burn and post-trial burn the spent decontamination solution and the Monitoring Support Building and Laboratory aqueous liquid wastes shall be fed only into the secondary combustion chamber of each LIC with, or without, the chemical agent feed to the primary combustion chamber.

viii. During the shakedown, trial burn and post-trial burn periods, the feed rates to each LIC shall not exceed the limits in Table 6-1 of this permit and in accordance with permit condition VI.B.2.

ix. During the chemical agent post-trial burn periods at each incinerator, the Permittee shall incinerate only the chemical agent that has been test burned during the preceding chemical agent trial burn, at the feed rates specified in Table 6-1 of this permit and in accordance with permit condition VI.B.2.

x. During the shakedown, trial burn, and post-trial burn periods, the Permittee shall conduct sufficient analysis of the waste treated in each LIC to verify that the waste feed is within the physical and chemical composition limits specified in this permit, in accordance with the approved trial burn plan and the waste analysis plan requirements in Attachment 2 of this permit.

xi. Only one chemical agent, or waste containing one chemical agent, shall be fed to any LIC incinerator, at any given time.

VI.B.3. OPERATING CONDITIONS

i. During the shakedown, trial burn and post-trial burn periods, the Permittee shall operate each LIC in order to maintain the system and process parameters listed in Table 7-1 of this permit within the ranges or setpoints specified in Table 7-1 of this permit.

ii. During the shakedown, trial burn and post-trial burn periods, the Permittee shall operate the AWFCO systems, specified in Table 6-3 of this permit, to automatically cut off and or lock out the hazardous waste feed to each LIC when the monitored operating conditions deviate from the setpoints specified in Table 6-3 of this permit.

iii. The Permittee shall not commence any trial burn period until documentation has been submitted to the Department verifying that each LIC has operated at the planned trial burn operating setpoints in Table 6-3 of this permit and at a minimum of 90% of the feed rates in Table 6-1 of this permit for a minimum of an eight consecutive hour period on two consecutive days.

VI.B.4. MONITORING REQUIREMENTS

i. During the shakedown, trial burn and post-trial burn periods, the Permittee shall maintain, calibrate, and operate process monitoring, control, and recording equipment, as specified in Tables 6-3 and 7-1 of this permit, while incinerating hazardous waste.

ii. During the shakedown, trial burn and post-trial burn periods, hazardous wastes shall not be fed to each LIC if any of the monitoring instruments listed in Table 7-1 of this permit, fails to operate properly.

VI.B.5. WASTE FEED CUT-OFF REQUIREMENTS

i. During the shakedown, trial burn and post-trial burn periods, the Permittee shall operate the systems, specified in Table 6-3 of this permit, to automatically cut off and or lock out the hazardous waste feed to each LIC when the monitored operating conditions deviate from the setpoints specified in Table 6-3 of this permit.

ii. During the shakedown, trial burn and post-trial burn periods, the Permittee shall manually cut off and/or lock out the waste feed, and perform staged shut down of each LIC, in accordance with the approved procedures specified in Volume II, Section D-5 and Volume VII, Attachment D-3, Section D-5b of the Application, when the operating conditions deviate from the limits specified in permit condition VII.B.4. unless the deviation automatically activates the waste feed cutoff and/or lock out sequence specified in permit condition VI.B.5.i.

iii. In the event of a malfunction of the automatic waste feed cut-off systems listed in Table 6-3 of this permit during the shakedown, trial burn and post-trial burn, the Permittee shall immediately, manually, cut off and/or lockout the waste feed, and perform staged shut down of each LIC in accordance with the approved procedures specified in Volume II, Section D-5 and Volume VII, Attachment D-3, Section D-5b of the Application. The Permittee shall not restart the incinerator until the problem causing the malfunction has been identified and corrected. Waste feed may not restart until the parameter(s) which caused the feed cutoff or lockout is/are restored to permit limits and all other parameters are within permit limits.

iv. If any of the following automatic waste feed cutoffs from Table 6-3, for either LIC occurs at a maximum frequency of five times within 30 LIC operating days in succesession, the Permittee is required to verbally notify the Department of the occurrence and shall require Department approval before waste feed can resume to the LICs in accordance with 40 CFR §270.32(b)(2): Item numbers LIC-01, LIC-03, LIC-06, LIC-09, LIC-10, LIC-11, LIC-12, LIC-15, LIC-16, LIC-17, LIC-18, LIC-22, LIC-24, LIC-26, LIC-27, LIC-28, LIC-30, LIC-31, and LIC-37. These waste feed cutoffs, whether automatically or manually activated, are counted if the specified setpoints are deviated from while waste or waste residues continue to be processed in the incinerator chambers. A cascade event is counted at a frequency of one towards the first waste feed cutoff parameter specified on Table 6-3 which the setpoint is deviated from.

VI.C. METAL PARTS FURNACE (MPF)

VI.C.1. PERFORMANCE STANDARDS

i. During the shakedown, trial burn and post-trial burn periods, the MPF shall achieve a destruction and removal efficiency (DRE) of 99.99% for the chemical agent and a DRE of 99.9999% for the surrogate POHCs .

Surrogate POHCs	Chemical Agent
Perchloroethylene	GB, VX, and HD (Mustard), individually
Trichloroethane	
Monochlorobenzene	

The DRE shall be calculated by the method specified in 40 CFR §264.343(a)(1).

ii. During the shakedown, trial burn and post-trial burn periods, the particulate matter emission from the common stack, corrected to 7% oxygen in accordance with the formula given below (40 CFR §264.343 and 40 CFR §270.32(b)(2)), shall not exceed 34.3 mg/dscm (0.015 grains/dscf). [40 CFR §270.32(b)(2)]

$$P_c = P_m \times 14/(21 - Y)$$

Where: P_c = corrected concentration of particulate matter

P_m = measured concentration of particulate matter ppm (dry volume)

Y = measured O_2 concentration in the stack gas

iii. The hydrogen chloride(HCl) emission from the MPF shall not exceed 8.16×10^{-3} grams/second or 4 pounds/hour. [40 CFR §§264.343(b), 270.32(b)(2)]

iv. During the shakedown, trial burn, and post-trial burn periods, if the emission rates listed in Table 6-6 are exceeded, the Permittee shall notify the Department in accordance with permit condition VI.A.5.vii.

The above emission limits shall be met by limiting feed rate of each metal into MPF as specified in Table 6-4. [40 CFR §270.32(b)(2)]

v. If the Permittee submits a notification pursuant to permit condition VI.C.1.iv., the Director may submit in writing direction to the Permittee to stop waste feed to the MPF in accordance with permit condition VI.A.5.vii. Resumption of waste feed operations to the MPF shall be in accordance with permit condition VI.A.5.vii.

vi. During the shakedown, trial burn and post-trial burn periods, the Permittee shall control emission of products of incomplete combustion (PICs) from the common stack such that the carbon monoxide (CO) level in the common stack, corrected to 7% oxygen in accordance with the formula given below shall not exceed 100 parts per million (ppm), dry volume, over an hourly rolling average. [40 CFR §264.347(a)(2)]

$$CO_c = CO_m \times (21 - 7)/(21 - O_m)$$

Where: CO_c = corrected CO ppm (dry volume)
CO_m = measured CO ppm (dry volume)
O_m = measured % O_2 (dry volume)

vii. During the shakedown, trial burn and post-trial burn periods, the Permittee shall continuously monitor emissions of chemical agents from the MPF. The emission level shall not exceed the following concentrations:

	Chemical Agent - Concentration (mg/m^3)		
	VX	GB	HD
Maximum Instantaneous Stack Emission	0.0003	0.0003	0.03

viii. During the shakedown, trial burn, and post-trial burn periods, compliance with the operating conditions specified in permit condition VI.C.3, shall be regarded as compliance with the required performance standards identified in permit conditions VI.C.1.i through VI.C.1.vii. However, if it is determined that during the effective period of this permit that compliance with the operating conditions in permit condition VI.C.3 is not sufficient to ensure compliance with the performance standards specified in permit conditions VI.C.1.i through VI.C.1.vii, the permit may be modified, revoked, or reissued, pursuant to 40 CFR §270.41.[40 CFR §270.32(b)(2)]

VI.C.2. LIMITATION ON WASTE FEED[40 CFR 270.62(c)]

i. During shakedown, trial burn and post-trial burn periods, the Permittee shall incinerate only the hazardous wastes in Table 6-4 of this permit, in compliance with the operating requirements specified in permit condition VI.C.3.

ii. After successful completion of the chemical agent trial burn the Permittee shall be authorized to commence hazardous waste feed to the MPF up to 50% of the maximum post trial burn feed rates indicated in Tables 6-4 of this permit and shall not deviate from the operating conditions specified in Tables 6-7 and 7-3 of this permit.

iii. After successful completion of the chemical agent trial burn, the Permittee shall be authorized to commence hazardous waste feed to MPF up to 75% of the maximum feed rates indicated in Tables 6-4 of this permit upon submittal and Departmental approval of a report in the format specified by the Department showing compliance with the performance standards in permit condition VI.C.1.

iv. After successful completion of the chemical agent trial burn, the Permittee shall be authorized to commence hazardous waste feed to the MPF up to 100% feed rates demonstrated during the previous trial burn for the MPF upon submittal and Departmental approval of the following:

1. A complete trial burn report.

2. A submittal proposing operating conditions for post trial burn and normal operating periods.

3. A health risk assessment report completed pursuant to permit condition II.N.

v. During the shakedown, trial burn and post-trial burn periods, the Permittee shall incinerate only the hazardous wastes listed in Table 6-4 of this permit, in compliance with the operating requirements specified in permit condition VI.C.3.

vi. During the shakedown, trial-burn, and post-trial burn, the feed rates to the MPF shall not exceed the limits in Table 6-6 of this permit and in accordance with permit condition VI.C.2.

vii. The Permittee shall not feed the following wastes to the MPF, during the shakedown Period.

1. Acutely toxic hazardous wastes listed in 40 CFR §261.33(e).

2. RCRA Hazardous Wastes FO20 through FO23, FO26, and FO27.

3. Any waste containing chemical agents except during Shakedown II.

4. Any wastes containing PCBs.

viii. Throughout operation, the Permittee shall conduct sufficient analysis of the waste treated in the MPF to verify that the waste feed is within the physical and chemical composition limits specified in this permit, in accordance with the waste analysis plan requirements in Attachment 2 of this permit.

ix. Only one chemical agent, or waste containing one chemical agent, shall be fed to the metal parts furnace, at any given time.

VI.C.3. OPERATING CONDITIONS

i. During the shakedown, trial burn and post-trial burn periods, the Permittee shall operate the MPF in order to maintain the system and process parameters listed in Table 7-3 of this permit within the ranges or setpoints specified in Table 7-3 of this permit.

ii. During the shakedown, trial burn and post-trial burn periods, the Permittee shall operate the AWFCO systems, specified in Table 6-7 of this permit, to automatically cut off and or lock out the hazardous waste feed to the MPF when the monitored operating conditions deviate from the setpoints specified in Table 6-7 of this permit.

iii. Only one loaded tray containing the waste materials shall be fed into the MPF at any given time, with a minimum interval between each tray feed as specified in Table 6-4 of this permit.

iv. The hourly feed rate of the residual chemical agent contained in the MPF feed, which was calculated, assuming a 5% heel, from the amount of chemical agent in the munitions, shall not exceed the limits provided in Table 6-4 of this permit, unless the following conditions are met:

a. The Permittee has provided the Department verbal notice of the following:

(I) The detection of a munition that can not be drained to a 5% or less residual chemical agent heel indicating, its type and its location (i.e., process line leading to furnace, temporary holding location).

(II) The percent chemical agent heel remaining in the munition.

(III) Efforts expended to facilitate additional draining of the munition.

b. The Permittee has provided the Department written procedures for processing of the munition that can not be drained to a 5% or less residual chemical agent heel to reduce its vaporization rate in the MPF to the rate which would be produced by the feedrate allowed in Table 6-4 of this permit. These procedures must be consistent with the procedures specified in Attachment 4 of this permit with the following exceptions:

(I) The temperature and residence time in zones 1, 2, and 3 will be specified based on the development of a vaporization curve and calculations for the munition type and the quantity and type of residual chemical agent remaining, which does not exceed the vaporization rate which would be produced by the feedrate allowed in Table 6-4 of this permit. The supporting vaporization curve and calculations shall be provided with the procedures to the Department.

II) The temperature maintained in the afterburner shall be in accordance with permit conditions VI.C.3.i and ii.

c. The Permittee receives approved procedures from the Department for processing the munition that cannot be drained to a 5% or less residual chemical agent heel.

v. The Permittee shall not commence any trial burn period until documentation has been submitted to the Department verifying that the MPF has operated at the planned trial burn operating setpoints in Table 6-7 of this permit and at a minimum of 90% of the feed rates in Table 6-4 of this permit for a minimum of an eight consecutive hour period on two consecutive days.

VI.C.4. MONITORING REQUIREMENTS

i. During the shakedown, trial burn and post-trial burn periods, the Permittee shall maintain, calibrate, and operate process monitoring, control, and recording equipment, as specified in Tables 6-7 and 7-3 of this permit, while incinerating hazardous waste.

ii. During the shakedown, trial burn and post-trial burn periods, hazardous wastes shall not be fed to the MPF if any of the monitoring instruments listed in Tables 6-7 and 7-3 of this permit, fails to operate properly.

VI.C.5. WASTE FEED CUT-OFF REQUIREMENTS

i. During the shakedown, trial burn and post-trial burn periods, the Permittee shall construct and maintain the systems, specified in Table 6-7 of this permit, to automatically cut off and/or lock out the hazardous waste feed to the MPF when the monitored operating conditions deviate from the steeping specified in Table 6-7 of this permit.

ii. During the shakedown, trial burn and post-trial burn periods, the Permittee shall manually cut off and/or lock out the waste feed and perform staged shut down of the MPF, in accordance with the approved procedures specified in Volume II, Section D-6 and Volume VII, Attachment D-3, Section D-6b of the Application, when the operating conditions deviate from the limits specified in Table 6-7 of this permit, unless the deviation automatically activates the waste feed cutoff and/or lockout sequence specified in permit condition VI.C.5.i.

iii. During the shakedown, trial burn and post-trial burn periods, in the event of a malfunction of the AWFCO systems listed in Table 6-7 of this permit, the Permittee shall immediately, manually, cut off and/or lock out the waste feed, and perform staged shut down of the MPF in accordance with the approved procedures specified in Volume II, Section D-6 and Volume VII, Attachment D-3, Section D-6b of the Application. The Permittee shall not restart the incinerator until the problem causing the malfunction has been identified and corrected. Waste feed may not restart until the parameter(s) which caused the feed cutoff or lockout is/are restored to permit limits and all other parameters are within permit limits.

iv. If any of the following automatic waste feed cutoffs from Table 6-7, for the MPF occurs at a maximum frequency of five times within 30 MPF operating days in succession, the Permittee is required to verbally notify the Department of the occurrence and shall require Department approval before waste feed can resume to the MPF in accordance with 40 CFR §270.32(b)(2): Item numbers MPF-01, MPF-02, MPF-03, MPF-05, MPF-06, MPF-07, MPF-10, MPF-11, MPF-12, MPF-13, MPF-14, MPF-15, MPF-16, MPF-17, MPF-19, MPF-23, MPF-24, MPF-25, MPF-26, MPF-27, MPF-28, MPF-29, and MPF-34. These waste feed cutoffs, whether automatically or manually activated, are counted if the specified setpoints are deviated from while waste or waste residues continue to be processed in the incinerator chambers. A cascade event is counted at a frequency of one towards the first waste feed cutoff parameter specified on Table 6-7 which the setpoint is deviated from.

VI.D. DEACTIVATION FURNACE SYSTEM (DFS)

VI.D.1. PERFORMANCE STANDARDS

i. During the shakedown, trial burn and post-trial burn periods, the DFS must achieve a destruction and removal efficiency (DRE) of 99.99% for the chemical agent and a DRE of 99.9999% for the surrogate POHCs.

Surrogate POHCs	Chemical Agent
Perchloroethylene	GB and VX, individually
Trichloroethane	
Monochlorobenzene	

The DRE shall be calculated by the method specified in 40 CFR §264.343(a)(1).

ii. During the shakedown, trial burn and post-trial burn periods, the particulate matter emissions from the common stack, corrected to 7% oxygen in accordance with the formula given below [40 CFR §264.343 and 40 CFR §270.32(b)(2)], shall not exceed 34.3 mg/dscm (0.015 grains/dscf). [40 CFR §270.32(b)(2)]

$$P_c = P_m \times 14/(21 - Y)$$

Where: P_c = corrected concentration of particulate matter
P_m = measured concentration of particulate matter ppm (dry volume)
Y = measured O_2 concentration in the stack gas

iii. The hydrogen chloride(HCl) emission from the DFS shall not exceed 1.16×10^{-3} grams per second or 4 pounds/hour.[40 CFR §§264.343(b), 270.32(b)(2)]

iv. During the shakedown, trial burn, and post-trial burn periods, if the emission rates listed in Table 6-10 are exceeded, the Permittee shall notify the Department in accordance with permit condition VI.A.5.vii.

The emission limits shall be met by limiting feed rate into the DFS as specified in Table 6-8. [40 CFR §270.32(b)(2)]

v. If the Permittee submits a notification pursuant to permit condition VI.D.1.iv., the Director may submit in writing direction to the Permittee to stop waste feed to the DFS in accordance with permit condition VI.A.5.vii. Resumption of waste feed operations to the DFS shall be in accordance with permit condition VI.A.5.vii. [40 CFR §270.32(b)(2)]

vi. During the shakedown, trial burn and post-trial burn periods, the Permittee shall control emission of products of incomplete combustion from the common stack such that the carbon monoxide (CO) level in the common stack, corrected to 7% oxygen in accordance with the formula given below shall not exceed 100 parts per million (ppm), dry volume, over an hourly rolling average. [40 CFR §§ 264.347(a)(2),270.32(b)(2)]

$$CO_c = CO_m \times (21 - 7)/(21 - O_m)$$

Where: CO_c = corrected CO ppm (dry volume)
CO_m = measured CO ppm (dry volume)
O_m = measured % O_2 (dry volume)

vii. During the shakedown, trial burn and post-trial burn periods, the Permittee shall continuously monitor and control emission of chemical agents from the DFS. The emission level shall not exceed the following concentrations [40 CFR §270.32(b)(2)]:

	Chemical Agent - Concentration (mg/m^3)		
	VX	GB	HD
Maximum Instantaneous Stack Emission	0.0003	0.0003	0.03

viii. During the shakedown, trial burn, and post-trial burn periods, compliance with the operating conditions specified in permit condition VI.D.3, shall be regarded as compliance with the required performance standards identified in permit conditions VI.D.1.i through VI.D.1.vii. However, if it is determined that during the effective period of this permit that compliance with the operating conditions in permit condition VI.D.3 is not sufficient to ensure compliance with the performance standards specified in permit conditions VI.D.1.i through VI.D.1.vii, the permit may be modified, revoked, or reissued, pursuant to 40 CFR §270.41. [40 CFR §270.32(b)]

VI.D.2. LIMITATION ON WASTE FEED[40 CFR 270.62(c)]

i. During the shakedown, trial burn, and post-trial burn periods, the Permittee shall incinerate only the hazardous wastes in Table 6-8 of this permit in the DFS, in compliance with the operating requirements specified in permit condition VI.D.3.

ii. After successful completion of the chemical agent trial burn the Permittee shall be authorized to commence hazardous waste feed to the DFS up to 50% of the maximum feed rates indicated in Table 6-8 of this permit and shall not deviate from the operating conditions specified in Tables 6-11 and 7-5 of this permit.

iii. After successful completion of the chemical agent trial burn, the Permittee shall be authorized to commence hazardous waste feed to DFS up to 75% of the maximum feed rates indicated in Table 6-8 of this permit upon submittal and Departmental approval of a report in the format specified by the Department showing compliance with the performance standards in permit conditions VI.D.1.

iv. After successful completion of the chemical agent trial burn, the Permittee shall be authorized to commence hazardous waste feed to the DFS up to 100% of the maximum feed rates demonstrated during the previous trial burn for the DFS upon submittal and Departmental approval of the following:

1. A complete trial burn report.

2. A submittal proposing operating conditions for post trial burn and normal operating periods.

3. A health risk assessment report completed pursuant to permit condition II.N.

v. During the trial burn, the Permittee shall incinerate only the hazardous wastes in Table 6-9 of this permit in the DFS, in compliance with the operating requirements specified in Condition VI.D.3. of this permit.

vi. During the shakedown, trial burn and post-trial burn periods, the feed rates to the DFS shall not exceed the limits in Table 6-10 of this permit and in accordance with permit condition VI.D.2.

vii. Throughout operation, the Permittee shall conduct sufficient analysis of the waste treated in the DFS to verify that the waste feed is within the physical and chemical composition limits specified in this permit, in accordance with the waste analysis plan requirements in Attachment 2 of this permit.

viii. Only one chemical agent, or waste containing one chemical agent, shall be fed to the deactivation furnace, at any given time.

VI.D.3. OPERATING CONDITIONS

i. During the shakedown, trial burn and post-trial burn periods, the Permittee shall operate the DFS in order to maintain the system and process parameters listed in Table 7-5 of this permit within the ranges or setpoints specified in Table 7-5 of this permit.

ii. During the shakedown, trial burn and post-trial burn periods, the Permittee shall operate the AWFCO systems, specified in Table 6-11 of this permit, to automatically cut off and or lock out the hazardous waste feed to the DFS when the monitored operating conditions deviate from the setpoints specified in Table 6-11 of this permit.

iii. The Permittee shall not commence any trial burn period until documentation has been submitted to the Department verifying that the DFS has operated at the planned trial burn operating setpoints in Table 6-11 of this permit and at a minimum of 90% of the feed rates in Table 6-8 of this permit for a minimum of an eight consecutive hour period on two consecutive days.

iv. The rate of movement of the heated discharge conveyor shall be controlled so as to provide a minimum solid retention time of 15 minutes inside the heated enclosure.

v. The rocket shear blade will be sprayed with a decontamination solution or process water at all times when a rocket piece is at the blast gate and the shear blade is in operation; or at all times when a rocket piece is at the blast gate and the gate is jammed. The flowrate of the decontamination solution or process water to the rocket shear blade will be continuously monitored and recorded during rocket processing operations. [40 CFR §270.32(b)(2)]

vi. A time delay of 30 seconds shall be provided for feeding other munition sections before and after feeding fuses to the DFS with the exception that nose plugs can be fed with the fuses. [40 CFR §270.32(b)(2)]

VI.D.4. MONITORING REQUIREMENTS

i. The Permittee shall maintain, calibrate, and operate process monitoring, control, and recording equipment, as specified in Tables 6-11 and 7-5 of this permit, while incinerating hazardous waste.

ii. Hazardous wastes shall not be fed to the DFS if any of the monitoring instruments listed in Tables 6-11 and 7-5 of this permit fails to operate properly.

VI.D.5. WASTE FEED CUT-OFF REQUIREMENTS

i. The Permittee shall construct and maintain the systems, specified in Table 6-11 of this permit, to automatically cut off and/or lock out the hazardous waste feed to the DFS when the monitored operating conditions deviate from the setpoint specified in the Table 6-11 of this permit.

ii. The Permittee shall manually cut off and/or lockout the waste feed and perform staged shut down of the DFS, in accordance with the approved procedures specified in Volume II, Section D-7 and Volume VII, Attachment D-3, Section D-7B of the Application, when the operating conditions deviate from the limits specified in permit condition VI.D.3., unless the deviation automatically activates the waste feed cutoff and/or lockout sequence specified in permit condition VI.D.5.i.

iii. In case of a malfunction of the automatic waste feed cutoff systems listed in Table 6-11 of this permit, the Permittee shall immediately, manually cut off and/or lock out the waste feed, and perform staged shut down of the DFS in accordance with the approved procedures specified in Volume II, Section D-7 and Volume VII, Attachment D-3, Section D-7b of the Application. The Permittee shall not restart the incinerator until the problem causing the malfunction has been identified and corrected. Waste feed may not restart until the parameter(s) which caused the feed cutoff or lockout is/are restored to permit limits and all other parameters are within permit limits.

iv. If any of the following automatic waste feed cutoffs from Table 6-11, for the DFS occurs at a maximum frequency of five times within 30 DFS operating days in succession, the Permittee is required to verbally notify the Department of the occurrence and shall require Department approval before waste feed can resume to the DFS in accordance with 40 CFR §270.32(b)(2): Item numbers DFS-02, DFS-03, DFS-05, DFS-07, DFS-08, DFS-11, DFS-12, DFS-13, DFS-14, DFS-15, DFS-16, DFS-17, DFS-18, DFS-19, DFS-20, DFS-21, DFS-25, DFS-27, DFS-28, DFS-29, DFS-30, DFS-31, DFS-34, and DFS-39. These waste feed cutoffs, whether automatically or manually activated, are counted if the specified setpoints are deviated from while waste or waste residues continue to be processed in the incinerator chambers. A cascade event is counted at a frequency of one towards the first waste feed cutoff parameter specified on Table 6-11 which the setpoint is deviated from.

VI.E. DUNNAGE INCINERATOR (DUN)

VI.E.1. PERFORMANCE STANDARDS

i. During the shakedown, trial burn and post-trial burn periods, the DUN must achieve a destruction and removal efficiency (DRE) of 99.99% for the chemical agent and a DRE of 99.9999% for the surrogate POHCs.

Surrogate POHCs	Chemical Agent
Perchloroethylene	GB, VX, and HD (Mustard), individually
Monochlorobenzene	

The DRE shall be calculated by the method specified in 40 CFR §264.343(a)(1).

ii. During the shakedown, trial burn and post-trial burn periods, the particulate matter emission from the DUN stack, corrected to 7% oxygen in accordance with the formula give below [40 CFR §264.343 and 40 CFR §270.32(b)(2)], shall not exceed 34.3 mg/dscm (0.015 grains/dscf).

$$P_c = P_m \times 14/(21 - Y)$$

Where: P_c = corrected concentration of particulate matter
P_m = measured concentration of particulate matter ppm (dry volume)
Y = measured O_2 in the stack gas

iii. The hydrogen chloride (HCl) emission from the DUN shall not exceed 5.04×10^{-1} grams per second or 4 pounds/hour. [40 CFR §§264.343(b), 270.32(b)(2)]

iv. During the shakedown, trial burn, and post-trial burn periods, if the emission rates listed in Table 6-14 are exceeded, the Permittee shall notify the Department in accordance with permit condition VI.A.5.vii.

The emission limits shall be met by limiting feed rate into the DUN as specified in Table 6-12. [40 CFR §270.32(b)(2)]

v. If the Permittee submits a notification pursuant to permit condition VI.E.1.iv., the Director may submit in writing direction to the Permittee to stop waste feed to the DUN in accordance with permit condition VI.A.5.vii. Resumption of waste feed operations to the DUN shall be in accordance with permit condition VI.A.5.vii. [40 CFR §270.32(b)(2)]

vi. During the shakedown, trial burn and post-trial burn periods, the Permittee must control emission of PICs from the DUN stack such that the CO level in the DUN stack, corrected to 7% oxygen in accordance with the formula given below shall not exceed 100 parts per million (ppm), dry volume, over an hourly rolling average. [40 CFR §§ 264.347(a)(2),270.32(b)(2)]

$$CO_c = CO_m \times (21 - 7)/(21 - O_m)$$

Where: CO_c = corrected CO ppm (dry volume)
CO_m = measured CO ppm (dry volume)
O_m = measured % O_2 (dry volume)

vii. During the shakedown, trial burn, and post-trial burn periods, the Permittee shall continuously monitor emissions of chemical agents from the DUN. The emission levels shall not exceed the following concentrations [40 CFR §270.32(b)(2)]:

	Chemical Agent - Concentration (mg/m^3)		
	VX	GB	HD
Maximum Instantaneous Stack Emission	0.0003	0.0003	0.03

viii. During the shakedown, trial burn, and post-trial burn periods, compliance with the operating conditions specified in permit condition VI.E.3, shall be regarded as compliance with the required performance standards identified in permit conditions VI.E.1.i through VI.E.1.vii. However, if it is determined that during the effective period of this permit that compliance with the operating conditions in permit condition VI.E.3 is not sufficient to ensure compliance with the performance standards specified in permit conditions VI.E.1.i through VI.E.1.vii, the permit may be modified, revoked, or reissued, pursuant to 40 CFR §270.41. [40 CFR §270.32(b)(2)]

VI.E.2. LIMITATION ON WASTE FEED[40 CFR 270.62(c)]

i. During the shakedown and post-trial burn periods, the Permittee shall incinerate only the hazardous wastes in Table 6-12 of this permit in the DUN, in compliance with the operating requirements specified in permit condition VI.E.3.

ii. After successful completion of the chemical agent trial burn the Permittee shall be authorized to commence hazardous waste feed to the DUN up to 50% of the maximum feed rates indicated in Table 6-12 of this permit and shall not deviate from the operating conditions specified in Tables 6-15 and 7-7 of this permit.

iii. After successful completion of the chemical agent trial burn, the Permittee shall be authorized to commence hazardous waste feed to the DUN up to 75% of the maximum feed rates indicated in Table 6-12 of this permit upon submittal and Departmental approval of a report in the format specified by the Department showing compliance with the performance standards in permit conditions VI.E.1.

iv. After successful completion of the chemical agent trial burn, the Permittee shall be authorized to commence hazardous waste feed to the DUN up to 100% feed rates demonstrated during the previous trial burn for the DUN upon submittal and Departmental approval of the following:

1. A complete trial burn report.

2. A submittal proposing operating conditions for post trial burn and normal operating periods.

3. A health risk assessment report completed pursuant to permit condition II.N.

v. During the trial burn period, the Permittee shall incinerate only the hazardous wastes in Table 6-13 of this permit in the DUN, in compliance with the operating requirements specified in permit condition VI.E.3.

vi. The feed rates to the DUN shall not exceed the limits in Table 6-14 of this permit. in accordance with permit condition VI.E.2.

vii. Notwithstanding the waste feed limits specified in permit condition VI.E.2.i. the Permittee shall not feed more than 92 pounds of dunnage into the DUN in any given fifteen-minute period. The frequency of the ram feed shall not be less than every 15 minutes.[40 CFR §270.32(b)(2)]

viii. Throughout operation, the Permittee shall conduct sufficient analysis of the waste treated in the DUN to verify that the waste feed is within the physical and chemical composition limits specified in this Permit, in accordance with the waste analysis plan requirements in Attachment 2 of this permit.

ix. Only one chemical agent, or waste containing one chemical agent, shall be fed to the Dunnage incinerator, at any given time.

VI.E.3. OPERATING CONDITIONS

i. During the shakedown, trial burn and post-trial burn periods, the Permittee shall operate the DUN in order to maintain the system and process parameters listed in Table 7-7 of this permit within the ranges or setpoints specified in Table 7-7 of this permit.

ii. During the shakedown, trial burn and post-trial burn periods, the Permittee shall operate the AWFCO systems, specified in Table 6-15 of this permit, to automatically cut off and or lock out the hazardous waste feed to the DUN when the monitored operating conditions deviate from the setpoints specified in Table 6-15 of this permit.

iii. Any metal waste fed into the DUN shall remain in the primary chamber, exposed to at least 1000°F, for a minimum period of 15 minutes, before being discharged from the primary chamber.

iv. The Permittee shall not commence any trial burn period until documentation has been submitted to the Department verifying that the DUN has operated at the planned trial burn operating setpoints in Table 6-15 of this permit and at a minimum of 90% of the feed rates in Table 6-12 of this permit for a minimum of an eight consecutive hour period on two consecutive days.

v. During the shakedown, trial burn and post-trial burn periods, the DUN primary chamber shall be operated to minimize residue build-up, including opening the horizontal sliding gate, removing the vertical drop chutes, and waste bin change-outs.

VI.E.4. MONITORING REQUIREMENTS

i. The Permittee shall maintain, calibrate, and operate process monitoring, control, and recording equipment as specified in Tables 6-15 and 7-7 of this permit, while incinerating hazardous waste.

ii. Hazardous wastes shall not be fed to the DUN if any of the monitoring instruments listed in Tables 6-15 and 7-7 of this permit fails to operate properly.

VI.E.5. WASTE FEED CUT-OFF REQUIREMENTS

i. The Permittee shall construct and maintain the systems specified in Table 6-15 of this permit, to automatically cut off and/or lock out the hazardous waste feed to the DUN when the monitored operating conditions deviate from the setpoint specified in the Table 6-15 of this permit.

ii. During the shakedown, trial burn and post-trial burn periods, the Permittee shall manually cut off the waste feed and perform staged shutdown of the DUN, in accordance with the approved procedures specified in Volume II, Section D-8 and Volume VII, Attachment D-3, Section D-8b of the Application, when the operating conditions deviate from the limits specified in Condition VI.E.3. of this permit, unless the deviation automatically activates the waste feed cut-off sequence specified in permit condition VII.E.6.i.

iii. If a malfunction of the automatic waste feed cutoff systems listed in Table 6-15 of this permit occurs during the shakedown, trial burn and post-trial burn periods, the Permittee shall immediately, manually, cut off and/or lock out the waste feed and perform staged shut down of the DUN in accordance with the approved procedures specified in Volume II, Section D-8 and Volume VII, Attachment D-3, Section D-8b of the Application. The Permittee shall not restart the incinerator until the problem causing the malfunction has been identified and corrected. Waste feed may not restart until the parameter(s) which caused the feed cutoff or lock out is/are restored to permit limits and all other parameters are within permit limits.

iv. If the following automatic waste feed cutoffs from Table 6-15, for the DUN occurs at a maximum frequency of five times within 30 DUN operating days in succession, the Permittee is required to verbally notify the Department of the occurrence and shall require Department approval before waste feed can resume to the DUN in accordance with 40 CFR §270.32(b)(2): Item numbers DUN-02, DUN-03, DUN-04, DUN-05, DUN-06, DUN-07, DUN-08, DUN-09, DUN-10, DUN-11, DUN-12, DUN-13, DUN-14, DUN-15, DUN-16, DUN-17, DUN-18, and DUN-24. These waste feed cutoffs, whether automatically or manually activated, are counted if the specified setpoints are deviated from while waste or waste residues continue to be processed in the incinerator chambers. A cascade event is counted at a frequency of one towards the first waste feed cutoff parameter specified on Table 6-15 which the setpoint is deviated from.

VI.F. COMMON STACK FOR LIC, MPF, & DFS

VI.F.1. During the shakedown, trial burn and post-trial burn periods, the Permittee shall install and maintain the CEMs for oxygen, carbon monoxide, and chemical agent, downstream of the LIC, MPF, and DFS pollution abatement system blowers and install and maintain the continuous exhaust gas monitoring systems for NO_x and chemical agent emissions from the common stack.

VI.F.2. During the shakedown, trial burn and post-trial burn periods, the exhaust gas monitoring systems specified in Condition VI.F.1. of this permit, shall be calibrated, inspected and operated in accordance with the applicable elements of Conditions VI.A.2. and VI.A.3. of this permit.

VI.F.3. During the shakedown, trial burn and post-trial burn periods, the chemical agent emission from the common stack, monitored as specified in permit condition VI.F.2. of this permit, shall not exceed the following concentrations:

	Chemical Agent - Concentration (mg/m^3)		
	VX	GB	HD
Maximum Instantaneous Stack Emission	0.0003	0.0003	0.03

VI.F.4. During the shakedown, trial burn and post-trial burn periods, the waste feeds to all contributing incinerator(s) shall be automatically cutoff or locked out when the chemical agent emission level in the common stack exceeds the values specified in Condition VI.F.3. of this permit.

VI.F.5. The Permittee shall submit an engineering design to incorporate "staggered" ACAMS monitoring at the stack to allow for continuous sampling and therefore allow for quicker response to releases.

i. The Permittee shall submit an engineering design and a work plan implementation schedule 360 days from the effective date of this permit condition or a permit modification in accordance with 40 CFR 270.42.

TABLE 6-1 MAXIMUM FEED RATES TO EACH LIQUID INCINERATOR

DESCRIPTION OF HAZARDOUS WASTES	Feed-Rate
Surrogate	1032 lbs/hr.
	18 lbs/min.
Chemical Agents:	
VX	680 lbs/hr.
	12 lbs/min.
GB	1030 lbs/hr.
	18 lbs/min.
HD	1305 lbs/hr.
	23 lbs/min.
Decontamination Solution and Monitoring Support Building and Laboratory, Aqueous Liquid Wastes:	2000 lbs/hr.
	34 lbs/min.

METAL FEEDRATES

Arsenic:	1.58E-01 lbs/hr	Lead:	2.18E-01 lbs/hr
Chromium:	4.19E-02 lbs/hr	Mercury:	4.46E-02 lbs/hr
Thallium:	4.19E-01 lbs/hr	Manganese:	6.80E+00 lbs/hr

CHLORINE/CHLORIDE FEEDRATES

Hydrogen Chloride	2.74E-01 lbs/hr
Chlorine	3.29E-01 lbs/hr
Total Chlorine	6.03E-01 lbs/hr

TABLE 6-2 ALLOWABLE EMISSION RATES FROM THE COMBINED LIQUID INCINERATORS

Allowable Emission Rates (grams/second)		
Constituent	CAS No.	LIC
ORGANICS		
TEQ 2,3,7,8-PCDF's [Dioxin & Furan congeners]		1.95E-09
1,1,2,2-Tetrachloroethane	79-34-5	6.39E-06
1,1-Dichloroethane	75-34-3	3.42E-06
2-Hexanone	591-78-6	1.72E-05
Acetone	67-64-1	3.31E-01
Benzene	71-43-2	5.77E-04
Benzoic Acid	65-85-0	1.08E-03
Benzyl Alcohol	100-51-6	1.12E-02
Bis(2-ethylhexyl)phthalate	117-81-7	2.59E-03
Bromodichloromethane		3.42E-06
Bromoform	75-22-2	3.18E-05
Carbon disulfide		6.50E-05
Carbon Tetrachloride	56-23-5	2.20E-04
Chlorobenzene	106-90-7	1.67E-05
Chloroform	67-66-3	1.39E-04
Chloromethane	74-87-3	4.99E-03
m-Cresol	108-39-4	1.27E-03
o-Cresol	95-48-7	1.17E-03
p-Cresol	106-44-5	3.94E-04
Di(n)octyl phthlate	117-84-0	1.23E-04
Di-n-butyl Phthalate	84-74-2	6.24E-05
Dibromochloromethane	124-48-1	3.42E-06
(cis)1,3-Dichloropropene	542-75-6	1.62E-03
(trans)1,3-Dichloropropene	542-75-6	3.42E-06
Diethyl Phthalate	84-66-2	2.49E-04
Dimethyl Phthalate	131-11-3	1.77E-03
Ethylbenzene	100-41-4	9.92E-06
Methyl chloroform	71-55-6	1.66E-04
Methyl ethyl ketone	78-93-3	1.18E-03
Methyl isobutyl ketone		2.21E-05
Methylene chloride	75-09-2	3.76E-02
Naphthalene	91-20-3	6.24E-05
Propylene dichloride	78-87-5	1.88E-03
Styrene	100-42-5	5.64E-04
Tetrachloroethylene	127-18-4	1.15E-05

Allowable Emission Rates
(grams/second)

Constituent	CAS No.	LIC
Toluene	106-88-3	2.11E-02
Vinyl acetate	108-05-4	4.88E-06
Vinyl chloride	75-01-4	2.95E-05
Total xylene	1330-20-7	4.49E-05
METALS		
Antimony	7440-36-0	1.29E-04
Arsenic	7440-38-2	2.20E-04
Barium	7440-39-3	1.77E-04
Beryllium	7440-41-7	5.82E-05
Boron	7440-42-8	6.34E-03
Cadmium	7440-43-9	5.82E-05
Chromium	7440-47-3	5.82E-05
Cobalt	7440-48-4	7.28E-05
Copper	7440-50-8	7.28E-05
Lead	7439-2-1	3.03E-04
Manganese	7439-96-5	9.45E-03
Mercury	7440-97-6	6.19E-05
Nickel	7440-02-0	3.81E-04
Phosphorous	7440-14-0	4.10E-03
Selenium	7782-49-2	8.85E-05
Silver	7440-22-4	1.29E-04
Tin	7440-31-5	4.57E-04
Thallium	7440-28-0	5.82E-04
Vanadium	7440-62-2	8.85E-05
Zinc	7440-66-6	1.90E-03
ACID GASSES		
Hydrogen Chloride		3.81E-02
Hydrogen Fluoride		1.05E-01
OTHER CONSTITUENTS		
Chlorine		4.57E-02
Particulates		1.08E-01

TABLE 6-3 LIQUID INCINERATOR WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Shakedown and Post Trial-Burn	Setpoints During Trial Burns
LIC-01	PAHH-243/845	Primary chamber pressure high-high	-0.1 inch w.c.	-0.1 in. w.c.
LIC-02	TAH-43/752	Primary chamber exhaust temperature high	2,850 F	2,900 F
LIC-03	TALL-43/752	Primary chamber exhaust temperature low-low	2,550 F	2,500 F
LIC-04	PAL-51/765	Process water/spent decontamination solution feed pressure low	65 psig	65 psig
LIC-05	PALL-760/112	Agent feed pressure low	5 psig	5 psig
LIC-06	TALL-192/782	Secondary chamber exhaust temperature low-low	1,850 F	1,800 F
LIC-07	TAHH-613/713	Secondary chamber temperature high-high	2,150 F	2,200 F
LIC-08	PALL-200/795	Combustion air to secondary chamber burner pressure low-low	36 inches w.c.	36 in. w.c.
LIC-09	PDAH-854/855	Flue gas flow rate in the secondary chamber exhaust high	0.5 inch w.c.	0.5 in w.c.

All federal Title 40 CFR citations are Oregon rule as adopted by OAR 340-100-002

TABLE 6-3 (Continued) LIQUID INCINERATOR WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Shakedown and Post Trial-Burn	Setpoints During Trial Burns
LIC-10	FDAH-127/731	Surrogate and chemical agent feed rate high-high based on hourly rolling average (not to exceed 2% of hourly feed rate per min to maintain steady state)	Surrogate 1,032 lb/hr 18 lb/min VX 680 lb/hr 12 lb/min GB 1,030 lb/hr 18 lb/min HD 1,305 lb/hr 23 lb/min	Surrogate 1,032 lb/hr 18 lb/min VX 680 lb/hr 12 lb/min GB 1,030 lb/hr 18 lb/min HD 1,305 lb/hr 23 lb/min

TABLE 6-3 (Continued) LIQUID INCINERATOR WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Shakedown and Post Trial-Burn	Setpoints During Trial Burns
LIC-11	FAHH-102/763	Process water/spent decontamination solution feed rate high-high	2,000 lb/hr, 34 lb/min maximum; to be adjusted lower periodically or as necessary to comply with final metals and chlorine limitations	2,000 lb/hr, 34 lb/min maximum; to be adjusted lower periodically or as necessary to comply with final metals and chlorine limitations
LIC-12	AAHH-83/778	Secondary chamber exhaust CO concentration high-high	100 ppm corrected to 7% O_2, dry basis based on 1 hr. rolling average	100 ppm corrected to 7% O_2, dry basis based on 1 hr. rolling average
LIC-13	PALL-127A /127B/737A/ 737B	Primary atomizing air pressure low-low	12 psig	12 psig
LIC-14	PAL-58/809	Secondary atomizing air pressure low-low	47 psig	47 psig

TABLE 6-3 (Continued) LIQUID INCINERATOR WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Shakedown and Post Trial-Burn	Setpoints During Trial Burns
LIC-15	PDIT-90/814	Venturi scrubber pressure drop low-low	20 inches w.c.	20 in. w.c.
LIC-16	FAL-112/825	Clean liquor flow rate to scrubber tower low-low	766 gpm	690 gpm
LIC-17	AIT-134/163	Chemical agent emission high-high based on instantaneous measurement	0.0003 mg/m^3 GB 0.03 mg/m^3 HD 0.0003 mg/m^3 VX	0.0003 mg/m^3 GB 0.03 mg/m^3 HD 0.0003 mg/m^3 VX
LIC-18	ACAM-129	Chemical agent emission high-high based on instantaneous measurement at the common stack	0.0003 mg/m^3 GB 0.03 mg/m^3 HD 0.0003 mg/m^3 VX	0.0003 mg/m^3 GB 0.03 mg/m^3 HD 0.0003 mg/m^3 VX
LIC-19	LSHH-02/06 /702/706	Brine surge tanks 101,102,201,202. Both levels high-high	18 feet 3-inch level	18 feet 3-inch level
LIC-20	AAL-116/832	Clean liquor to scrubber tower pH low	8	7.5
LIC-21	PAL-129/839	Clean liquor to scrubber tower pressure low	15 psig	15 psig

All federal Title 40 CFR citations are Oregon rule as adopted by OAR 340-100-002

TABLE 6-3 (Continued) LIQUID INCINERATOR WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Shakedown and Post Trial-Burn	Setpoints During Trial Burns
LIC-22	TSHHH-396/817	Scrubber inlet temperature (quench tower exhaust gas temperature) high-high-high	250 F	250 F
LIC-23	FAL-88/828	Quench brine to venturi scrubber flowrate low	109 gpm	100 gpm
LIC-24	DAH-117/826	Brine density high	80 lb/ft^3	90 lb/ft^3
LIC-25	LSHH-99/820	Scrubber tower sump liquid level high-high	84 inches above bottom tangent line	84 inches above bottom tangent line
LIC-26	AIT-229/798	Oxygen concentration in secondary chamber exhaust gas high	12% corrected to a dry basis	12% corrected to a dry basis
LIC-27	AIT-229/798	Oxygen concentration in secondary chamber exhaust gas low	7% corrected to a dry basis	7% corrected to a dry basis
LIC-28	PSHH-888/896	Secondary chamber pressure high-high	-0.1 inch w.c.	-0.1 in. w.c.

TABLE 6-3(Continued) LIQUID INCINERATOR WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Shakedown and Post Trial-Burn	Setpoints During Trial Burns
LIC-29	LALL-99/820	Scrubber tower sump level low-low	24 inches above bottom tangent line	24 inches above bottom tangent line
LIC-30	BA-908/912	Flame loss in primary chamber burner	Flame loss	Flame loss
LIC-31	BA-909/913	Flame loss in secondary chamber burner	Flame loss	Flame loss
LIC-32	ZS-367A/567A	Slag discharge gate	Open	Open
LIC-33	02-112-PDIT-663A/B C/D	Prefilter pressure	10 inch w.c.	10 inch w.c.
LIC-34	02-112-PDIT-640A/B C/D	HEPA Filter pressure	10 inch w.c.	10 inch w.c.
LIC-35	TAHH-103/577	Temperature of gas to carbon filter system	130°F	130°F
LIC-36	MAHH-104/578	Moisture of gas to carbon filter system	55%	55%
LIC-37	TV-103B/577B	Bypass of carbon filter system	Open	Open

All federal Title 40 CFR citations are Oregon rule as adopted by OAR 340-100-002

TABLE 6-4 MAXIMUM FEED RATES TO THE METAL PARTS FURNACE

Type Munition And Chemical Agent	Maximum Units/Hr	Feed Interval Per Tray (Min)	Max. Weight Per Tray (lb)[4]	Maximum Feed Rate (lb/hr) VX	GB	HD	Bulk
M 121 A1 Proj, 155 MM (VX)	157	18	6990	47.1	-	-	-
M 121 A1 Proj, 155 MM (GB)	181	16	6990	-	58.8	-	-
M 426 Proj, 8 inch (VX)	81	20	7660	58.7	-	-	-
M 426 Proj, 8 inch (GB)	97	17	7660	-	70.3	-	-
M23 Mine Drum (VX) (empty)	24	20	2530	12.6	-	-	-
MC-1 Bomb (GB)	7.30	16	2620	-	80.3	-	-
MK-94 Bomb (GB)	7.30	16	2710	-	39.4	-	-
Spray Tank TMU-28 (VX)	1	60	3020	67.8	-	-	-
Ton Container (HD)	1.72	35	3360	-	-	146.2	-
Misc. Metal and Ash	4	15	5250[5]	15	15	26	13000

Surrogates Maximum feed rate 6607 lbs/hr

METAL FEEDRATES

Arsenic:	6.13E-02 lbs/hr	Lead:	9.20E+00 lbs/hr
Chromium:	1.50E+00 lbs/hr	Mercury:	3.08E-02 lbs/hr
Thallium:	8.57E-03 lbs/hr	Manganese:	1.12E+00 lbs/hr

CHLORINE/CHLORIDE FEEDRATES

Hydrogen Chloride	0.00E+00 lbs/hr
Chlorine	56.0E+00 lbs/hr
Total Chlorine	192.E+00 lbs/hr

[4] The maximum weight per tray includes the weight of the tray.
[5] The Permittee shall move trays above the weight limit into the TMA until a plan for treatment has been submitted to and approved by the Department.

Table 6-5 [RESERVED]

TABLE 6-6 ALLOWABLE EMISSION RATES FROM THE METAL PARTS FURNACE (MPF)

Allowable Emission Rates (grams/second)		
Constituent	CAS No.	MPF
ORGANICS		
TEQ 2,3,7,8-PCDF's [Dioxin & Furan congeners]		9.08E-10
1,1,2,2-Tetrachloroethane	79-34-5	6.98E-07
1,1-Dichloroethane	75-34-3	8.47E-07
2-Hexanone	591-78-6	6.98E-07
Acetone	67-64-1	8.34E-05
Benzene	71-43-2	3.15E-04
Benzoic Acid	65-85-0	5.91E-04
Benzyl Alcohol	100-51-6	5.94E-03
Bis(2-ethylhexyl)phthalate	117-81-7	1.18E-03
Bromodichloromethane		6.98E-07
Bromoform	75-22-2	4.22E-05
Carbon disulfide		4.09E-05
Carbon Tetrachloride	56-23-5	1.28E-05
Chlorobenzene	106-90-7	1.71E-06
Chloroform	67-66-3	5.88E-06
Chloromethane	74-87-3	2.86E-05
m-Cresol	108-39-4	6.23E-05
o-Cresol	95-48-7	1.94E-03
p-Cresol	106-44-5	6.67E-05
Di(n)octyl phthlate	117-84-0	6.67E-05
Di-n-butyl Phthalate	84-74-2	6.67E-05
Dibromochloromethane	124-48-1	6.98E-07
(cis)1,3-Dichloropropene	542-75-6	6.98E-07
(trans)1,3-Dichloropropene	542-75-6	6.98E-07
Diethyl Phthalate	84-66-2	6.67E-05
Dimethyl Phthalate	131-11-3	1.35E-03
Ethylbenzene	100-41-4	1.64E-06
Methyl chloroform	71-55-6	1.65E-06
Methyl ethyl ketone	78-93-3	1.58E-04
Methyl isobutyl ketone		6.98E-07
Methylene chloride	75-09-2	1.38E-04
Naphthalene	91-20-3	6.67E-05
Propylene dichloride	78-87-5	6.98E-07
Styrene	100-42-5	5.24E-05
Tetrachloroethylene	127-18-4	6.98E-07
Toluene	106-88-3	4.15E-05
Vinyl acetate	108-05-4	6.98E-07
Vinyl chloride	75-01-4	5.65E-05

Allowable Emission Rates (grams/second)		
Constituent	CAS No.	MPF
Total xylene	1330-20-7	6.98E-07
METALS		
Antimony	7440-36-0	1.19E-04
Arsenic	7440-38-2	8.51E-05
Barium	7440-39-3	2.35E-04
Beryllium	7440-41-7	2.38E-05
Boron	7440-42-8	2.29E-03
Cadmium	7440-43-9	5.73E-05
Chromium	7440-47-3	6.99E-05
Cobalt	7440-48-4	5.94E-05
Copper	7440-50-8	5.94E-05
Lead	7439-2-1	1.45E-04
Manganese	7439-96-5	1.56E-03
Mercury	7440-97-6	4.28E-05
Nickel	7440-02-0	1.38E-04
Phosphorous	7440-14-0	1.16E-03
Selenium	7782-49-2	7.23E-05
Silver	7440-22-4	1.19E-04
Tin	7440-31-5	1.19E-04
Thallium	7440-28-0	1.19E-05
Vanadium	7440-62-2	2.38E-05
Zinc	7440-66-6	2.09E-04
ACID GASSES		
Hydrogen Chloride		8.16E-03
Hydrogen Fluoride		1.93E-02
OTHER CONSTITUENTS		
Chlorine		2.57E-02
Particulates		5.04E-02

TABLE 6-7 METAL PARTS FURNACE WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Shakedown and Post Trial-Burn	Setpoints During Trial Burns
MPF-01	TIC-152A	MPF temperature zone 1 high-high	1,750°F for projectiles 1,550°F for ton containers	1,800°F for projectiles 1,600°F for ton containers
MPF-02	TIC-141A	MPF temperature zone 2 high-high	1,750°F for projectiles 1,550°F for ton containers	1,800°F for projectiles 1,600°F for ton containers
MPF-03	TIC-153A	MPF temperature zone 3 high-high	1,750°F for projectiles 1,550°F for ton containers	1,800°F for projectiles 1,600°F for ton containers
MPF-04	PAL-159	Natural gas to MPF pressure low	4 psig	4 psig
MPF-05	TAHH-87	MPF afterburner temperature high-high	2,150°F	2,200°F
MPF-06	TALL-87	MPF afterburner temperature low-low	1,850°F	1,800°F
MPF-07	TAHH-223	Quench tower exhaust gas temperature high-high	250°F	250°F
MPF-08	LAHH-244	Scrubber tower sump liquid level high-high	84 in. above bottom tangent line	84 in. above bottom tangent line
MPF-09	LALL-246	Scrubber tower sump level low-low	24 in. above bottom tangent line	24 in. above bottom tangent line

TABLE 6-7(Continued) METAL PARTS FURNACE WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Shakedown and Post Trial-Burn	Setpoints During Trial Burns
MPF-10	TIC-152 TIC-141 TIC-153	MPF temperature low-low	1,000°F for ton containers 1,400°F for projectiles 1,100°F for bulk	1,000°F for ton containers 1,300°F for projectiles 1,100°F for bulk
MPF-11	PALL-138	Combustion air pressure low-low	20 in. w.c.	20 in. w.c.
MPF-12	PDAHH-786	Afterburner flue gas flow rate high-high	1.2 in. w.c.	1.5 in w.c.
MPF-13	AAH-384	Afterburner exhaust CO concentration high	100 ppm corrected to 7% O_2, dry basis based on hourly rolling average	100 ppm corrected to 7% O_2, dry basis based on hourly rolling average
MPF-14	PDIT-222	Venturi scrubber pressure drop low-low	20 in. w.c.	18 in. w.c.
MPF-15	FIT-248	Clean liquor to scrubber tower flow rate low-low	600 gpm	600 gpm
MPF-16	AIT-167	Chemical agent emission high-high based on instantaneous measurements	0.0003 mg/m^3 GB 0.03 mg/m^3 HD 0.0003 mg/m^3 VX	0.0003 mg/m^3 GB 0.03 mg/m^3 HD 0.0003 mg/m^3 VX
MPF-17	ACAM-129	Chemical agent emission high-high based on instantaneous measurements at the common stack	0.0003 mg/m^3 GB 0.03 mg/m^3 HD 0.0003 mg/m^3 VX	0.0003 mg/m^3 GB 0.03 mg/m^3 HD 0.0003 mg/m^3 VX
MPF-18	LSHH-02/ 06	Brine surge tanks 101,102. Both levels high-high	18 feet 3-inch level	18 feet 3-inch level
MPF-19	PAH-70	Burnout chamber pressure high	-0.5 in. w.c.	-0.1 in. w.c.

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TABLE 6-7(Continued) METAL PARTS FURNACE WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Shakedown and Post Trial-Burn	Setpoints During Trial Burns
MPF-20	AIT-247	Clean liquor to scrubber tower pH low	8	7.5
MPF-21	PAL-258	Clean liquor to scrubber tower pressure low	15 psig	15 psig
MPF-22	FAL-218	Quench brine to venturi scrubber flow rate low-low	100 gpm	90 gpm
MPF-23	DAH-249	Brine density high	80 lb/ft^3	90 lb/ft^3

TABLE 6-7(Continued) METAL PARTS FURNACE WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Shakedown and Post Trial-Burn	Setpoints During Trial Burns
MPF-24	PDAR	Munitions feed rate high	M121A1 (GB) 181 mun/hr M121A1 (VX) 157 mun/hr M426 (GB) 97 mun/hr M426 (VX) 81 mun/hr M23 Mine Drum (VX) empty 24 mun/hr MK-94 Bomb (GB) 7.3 mun/hr MC-1 Bomb (GB) 7.3 mun/hr Ton Container(HD) 1.72 mun/hr Spray Tank TMU-28 (VX) 1 mun/hr Miscellaneous Metal and Ash 13,000 lb/hr Surrogates 6607 lbs/hr	M121A1 (GB) 181 mun/hr M121A1 (VX) 157 mun/hr M426 (GB) 97 mun/hr M426 (VX) 81 mun/hr M23 Mine Drum (VX) empty 24 mun/hr MK-94 Bomb (GB) 7.3 mun/hr MC-1 Bomb (GB) 7.3 mun/hr Ton Container(HD) 1.72 mun/hr Spray Tank TMU-28 (VX) 1 mun/hr Miscellaneous Metal and Ash 13,000 lb/hr Surrogates 6607 lbs/hr

TABLE 6-7(Continued) METAL PARTS FURNACE WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Shakedown and Post Trial-Burn	Setpoints During Trial Burns
MPF-25	AIT-82	Oxygen content in afterburner exhaust gas high	12% corrected to a dry basis	12% corrected to a dry basis
MPF-26	AIT-82	Oxygen content in afterburner exhaust gas low	7.3% corrected to a dry basis	7.3% corrected to a dry basis
MPF-27	PSHH-390	Afterburner pressure high-high	-0.5 in. w.c.	-0.1 in. w.c.
MPF-28	(10) BA883-892	Flame loss in burnout chamber	MPF Zone 1 all burners out or 1 burner out and zone temperature less than 1400°F. MPF Zone 2 all burners out or 1 burner out and zone temperature less than 1400°F. MPF Zone 3 all burners out or 1 burner out and zone temperature less than 1400°F.	MPF Zone 1 all burners out or 1 burner out and zone temperature less than 1400°F. MPF Zone 2 all burners out or 1 burner out and zone temperature less than 1400°F. MPF Zone 3 all burners out or 1 burner out and zone temperature less than 1400°F.
MPF-29	(2)BA 893/894	Flame loss in afterburner	Flame loss	Flame loss

TABLE 6-7(Continued) METAL PARTS FURNACE WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Shakedown and Post Trial-Burn	Setpoints During Trial Burns
MPF-30	02-112-PDIT-642A/B C/D	Prefilter pressure	10 inch w.c.	10 inch w.c.
MPF-31	02-112-PDIT-642A/B C/D	HEPA filter pressure	10 inch w.c.	10 inch w.c.
MPF-32	TAHH-425	Temperature of gas to carbon filter system	130°F	130°F
MPF-33	MAHH-494	Moisture of gas to carbon filter system	55%	55%
MPF-34	TV-425B	Bypass of carbon filter system	Open	Open

TABLE 6-8 MAXIMUM FEED RATES TO THE DEACTIVATION FURNACE

Type Munition	Max.	Min. Feed	Maximum Feed Rate (lb/hr)				
And Agent	Units/Hr	Int. (Sec)	VX	GB	HD	Exp.	Prop.
M 55 Rocket (GB)	40	90	-	21.3	-	123.5	767.7
M 55 Rocket (VX)	40	90	19.9	-	-	123.5	767.7
M 121 A1 Proj,155 MM(VX)	120	30	-	-	-	327.0	-
M 121 A1 Proj,155 MM(GB)	120	30	-	-	-	327.0	-
M 426 Proj,8 inch(VX)	47	77	-	-	-	339.8	-
M 426 Proj,8 inch(GB)	47	77	-	-	-	339.8	-
M 23 Landmine(VX)	70	52	36.7	-	-	55.4	-

Surrogates Maximum feed rate 912 lbs/hr

METAL FEEDRATES

Arsenic:	3.02E-02 lbs/hr	Lead:	9.68E-01 lbs/hr
Chromium:	9.69E+00 lbs/hr	Mercury:	3.77E-03 lbs/hr
Thallium:	8.57E-03 lbs/hr	Manganese:	3.02E+00 lbs/hr

CHLORINE/CHLORIDE FEEDRATES

Hydrogen Chloride	1.14E+00 lbs/hr
Chlorine	0.00E+00 lbs/hr
Total Chlorine	1.14E+00 lbs/hr

TABLE 6-9 [RESERVED]

TABLE 6-10 ALLOWABLE EMISSION RATES FROM THE DEACTIVATION FURNACE (DFS)

Allowable Emission Rates (grams/second)		
Constituent	CAS No.	DFS
ORGANICS		
TEQ 2,3,7,8-PCDF's [Dioxin & Furan congeners]		6.69E-10
Total Polychlorinated Biphenyls [PCB cong]	1336-36-3	6.25E-07
1,1,2,2-Tetrachloroethane	79-34-5	7.33E-07
1,1-Dichloroethane	75-34-3	7.33E-07
2,4,6-Trinitrotoluene	118-96-7	2.55E-06
2,4-Dinitrotoluene	121-14-2	2.55E-06
2,6-Dinitrotoluene	606-20-2	2.55E-06
2-Hexanone	591-78-6	7.33E-07
Acetone	67-64-1	7.18E-02
Benzene	71-43-2	1.11E-04
Benzoic Acid	65-85-0	3.80E-04
Benzyl Alcohol	100-51-6	2.06E-03
Bis(2-ethylhexyl)phthalate	117-81-7	9.93E-05
Bromodichloromethane		3.31E-06
Bromoform	75-22-2	6.44E-05
Carbon disulfide		7.33E-07
Carbon Tetrachloride	56-23-5	7.33E-07
Chlorobenzene	106-90-7	2.35E-06
Chloroform	67-66-3	8.38E-05
Chloromethane	74-87-3	7.33E-07
m-Cresol	108-39-4	1.02E-05
o-Cresol	95-48-7	1.21E-04
p-Cresol	106-44-5	1.02E-04
Di(n)octyl phthlate	117-84-0	1.02E-05
Di-n-butyl Phthalate	84-74-2	1.10E-05
Dibromochloromethane	124-48-1	4.89E-06
(cis)1,3-Dichloropropene	542-75-6	7.33E-07
(trans)1,3-Dichloropropene	542-75-6	7.33E-07
Diethyl Phthalate	84-66-2	9.93E-06
Dimethyl Phthalate	131-11-3	4.23E-04
Ethylbenzene	100-41-4	2.25E-05
HMX	2691-41-0	2.55E-06
Methyl chloroform	71-55-6	1.22E-04
Methyl ethyl ketone	78-93-3	7.33E-04
Methyl isobutyl ketone		7.33E-07

Allowable Emission Rates (grams/second)		
Constituent	CAS No.	DFS
Methylene chloride	75-09-2	1.20E-02
Naphthalene	91-20-3	1.30E-05
Nitroglycerine	55-63-0	5.28E-04
Propylene dichloride	78-87-5	7.33E-07
RDX	121-82-4	2.55E-06
Styrene	100-42-5	1.11E-04
Tetrachloroethylene	127-18-4	7.33E-07
Toluene	106-88-3	6.17E-03
Vinyl acetate	108-05-4	7.33E-07
Vinyl chloride	75-01-4	1.62E-06
Total xylene	1330-20-7	1.58E-05
METALS		
Antimony	7440-36-0	4.19E-05
Arsenic	7440-38-2	4.19E-05
Barium	7440-39-3	8.42E-05
Beryllium	7440-41-7	6.21E-06
Boron	7440-42-8	1.77E-03
Cadmium	7440-43-9	1.87E-05
Chromium	7440-47-3	4.04E-05
Cobalt	7440-48-4	1.68E-05
Copper	7440-50-8	5.39E-05
Lead	7439-2-1	4.42E-04
Manganese	7439-96-5	4.19E-03
Mercury	7440-97-6	5.24E-06
Nickel	7440-02-0	3.05E-05
Phosphorous	7440-14-0	9.35E-04
Selenium	7782-49-2	4.19E-05
Silver	7440-22-4	1.68E-05
Tin	7440-31-5	1.65E-04
Thallium	7440-28-0	8.42E-06
Vanadium	7440-62-2	4.19E-05
Zinc	7440-66-6	8.42E-04
ACID GASSES		
Hydrogen Chloride		1.16E-03
Hydrogen Fluoride		1.66E-02
OTHER CONSTITUENTS		
Chlorine		2.22E-02
Particulates		1.81E-02

TABLE 6-11 DEACTIVATION FURNACE SYSTEM WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Shakedown and Post Trial-Burn	Setpoints During Trial Burn
DFS-01	TAHH-182	Rotary retort temperature high-high (flue gas temperature before spray)	1,900°F	1,950°F
DFS-02	TAHH-08	Flue gas temperature after spray high-high	1,600°F	1,650°F
DFS-03	TAL-08	Flue gas temperature after spray low-low	750°F	750°F
DFS-04	XS-207 XS-209	Jammed chute	Feed chute filled	Feed chute filled
DFS-05	PAHH-204	Pressure in rotary retort combustion chamber high-high	-0.1 inch w.c.	-.05 in. w.c.
DFS-06	TAHH-51A, 51B, 51C, 51D, 51E	Temperature on rotary retort shell high-high	1,600°F	1,600°F

TABLE 6-11(Continued) DEACTIVATION FURNACE SYSTEM WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Shakedown and Post Trial-Burn	Setpoints During Trial Burn
DFS-07	BA-850/851	Afterburner flame loss	Flame loss	Flame loss
DFS-08	TALL-42	Heated discharge conveyor temperature low-low	1,000°F	1,000°F
DFS-09	XS-58 XS-821	Jam in discharge conveyor	Discharge chute filled	Discharge chute filled
DFS-10	SAL-57	No motion on heated discharge conveyor	No motion	No motion
DFS-11	PDAH-813	Afterburner exhaust flow rate high	0.9 inch w.c.	1.0 in. w.c.
DFS-12	TALL-182	Rotary retort temperature low-low (flue gas temp before spray)	1,050°F except during start-up feed is allowed at 910°F up to 12 min. to achieve 1,050°F	1,000°F except during start-up feed is allowed at 900°F up to 5 min. to achieve 1,000°F
DFS-13	TAL-197	Afterburner temperature low-low	2,050°F for rockets; 1,850°F for other munitions	1,950°F for rockets 1,750°F for other munitions

TABLE 6-11(Continued) DEACTIVATION FURNACE SYSTEM WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Shakedown and Post Trial-Burn	Setpoints During Trial Burn
DFS-14	TAHH-197	Afterburner temperature high-high	2,350°F for rockets; 2,150°F for other munitions	2,500°F for rockets 2,250°F for other munitions
DFS-15	PDAL-08	Venturi scrubber pressure low-low	20 inch w.c.	18 inch w.c.
DFS-16	AAH-59	CO level in flue gas high	100 ppm, corrected to 7% O_2 dry basis based on hourly rolling average	100 ppm, corrected to 7% O_2 dry basis based on hourly rolling average
DFS-17	PDAR	Munitions feed rate high	M121A1 (GB) 120 mun/hr M121A1 (VX) 120 mun/hr M426 (GB) 47 mun/hr M426 (VX) 47 mun/hr Land Mine 70 mun/hr M55 (GB) 40 mun/hr M55 (VX) 40 mun/hr Surrogates 912 lbs/hr	M121A1 (GB) 120 mun/hr M121A1 (VX) 120 mun/hr M426 (GB) 47 mun/hr M426 (VX) 47 mun/hr Land Mine 70 mun/hr M55 (GB) 40 mun/hr M55 (VX) 40 mun/hr Surrogates 912 lbs/hr
DFS-18	FAL-30	Clean liquor to scrubber tower flow rate low-low	600 gpm	540 gpm

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TABLE 6-11(Continued) DEACTIVATION FURNACE SYSTEM WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Shakedown and Post Trial-Burn	Setpoints During Trial Burn
DFS-19	AIT-183	Chemical agent emission high-high based on instantaneous measurements	0.0003 mg/m^3 GB 0.03 mg/m^3 HD 0.0003 mg/m^3 VX	0.0003 mg/m^3 GB 0.03 mg/m^3 HD 0.0003 mg/m^3 VX
DFS-20	ACAM-297	Chemical agent emission high-high based on instantaneous measurements in cyclone enclosure	0.0003 mg/m^3 GB 0.03 mg/m^3 HD 0.0003 mg/m^3 VX	0.0003 mg/m^3 GB 0.03 mg/m^3 HD 0.0003 mg/m^3 VX
DFS-21	ACAM-129	Chemical agent emission high-high based on instantaneous measurements at the common stack	0.0003 mg/m^3 GB 0.03 mg/m^3 HD 0.0003 mg/m^3 VX	0.0003 mg/m^3 GB 0.03 mg/m^3 HD 0.0003 mg/m^3 VX
DFS-22	LSHH-02/06	Brine surge tanks 101,102,201,202. Both levels high-high	18 feet 3 inches level	18 feet 3 inches level
DFS-23	AAL-34	Clean liquor to scrubber tower pH low	8	7.5
DFS-24	PAL-36	Clean liquor to scrubber tower pressure low-low	15 psig	15 psig

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TABLE 6-11(Continued) DEACTIVATION FURNACE SYSTEM WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Shakedown and Post Trial-Burn	Setpoints During Trial Burn
DFS-25	TSHHH-375	Quench tower exhaust gas temperature high-high	250 F	250 F
DFS-26	FAL-06	Quench brine to venturi scrubber flow rate low-low	189 gpm	170 gpm
DFS-27	DAH-35	Brine density high	80 lb/ft^3	90 lb/ft^3
DFS-28	ST-98	Rotational speed	Shall not exceed 2 rpm	Shall not exceed 2 rpm
DFS-29	AIT-175	Oxygen in afterburner exhaust gas high	13% corrected to a dry basis	13% corrected to a dry basis
DFS-30	AIT-175	Oxygen in afterburner exhaust gas low	8.8% corrected to a dry basis	8.8% corrected to a dry basis
DFS-31	PAH-65	Afterburner pressure high	-0.1 inch w.c.	-0.05 in. w.c.
DFS-32	LAHH-32	Scrubber tower sump level high-high	84 inches above bottom tangent line	84 inches above bottom tangent line
DFS-33	LALL-24	Scrubber tower sump level low-low	24 inches above bottom tangent line	24 inches above bottom tangent line
DFS-34	BA-844	Flame loss in rotary retort	Flame loss	Flame loss

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TABLE 6-11(Continued) DEACTIVATION FURNACE SYSTEM WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Shakedown and Post Trial-Burn	Setpoints During Trial Burn
DFS-35	02-112-PDIT-644A/B C/D	Prefilter pressure	10 inch w.c.	10 inch w.c.
DFS-36	02-112-PDIT-646A/B C/D	HEPA filter pressure	10 inch w.c.	10 inch w.c.
DFS-37	TAHH-549	Temperature of gas to carbon filter system	130°F	130°F
DFS-38	MAHH-550	Moisture of gas to carbon filter system	55%	55%
DFS-39	TV-549B	Bypass of carbon filter system	Open	Open

TABLE 6-12 MAXIMUM FEED RATES TO THE DUN DURING SHAKEDOWN AND POST TRIAL-BURN

Description of Dunnage	Maximum lb/Hr	Maximum Feed Rate (lb/hr) VX	GB	HD
Wood, Carbon Filters, Carbon Canisters, Mine Containers, Lab Solid Waste Paper, or other similar waste	368 not to exceed more than 92 pounds in any 15 minute period	1.7	1.7	1.7
Surrogates	Maximum 324 lbs/hr not to exceed more than 81 pounds in any 15 minute period			

METAL FEEDRATES

Arsenic:	2.19E-03 lbs/hr	Lead:	1.78E-02 lbs/hr
Chromium:	7.29E-04 lbs/hr	Mercury:	5.70E-03 lbs/hr
Thallium:	2.60E-02 lbs/hr	Manganese:	2.81E-01 lbs/hr

CHLORINE/CHLORIDE FEEDRATES

Hydrogen Chloride	3.63E+00 lbs/hr
Chlorine	0.04E+00 lbs/hr
Total Chlorine	3.67E+00 lbs/hr

TABLE 6-13 [RESERVED]

TABLE 6-14 ALLOWABLE EMISSION RATES FROM THE DUNNAGE INCINERATOR (DUN)

Allowable Emission Rates (grams/second)		
Constituent	CAS No.	DUN
ORGANICS		
TEQ 2,3,7,8-PCDF's [Dioxin & Furan congeners]		3.54E-10
Total Polychlorinated Biphenyls [PCB cong]	1336-36-3	1.36E-07
1,1,2,2-Tetrachloroethane	79-34-5	1.67E-06
1,1-Dichloroethane	75-34-3	4.81E-07
2,4,6-Trinitrotoluene	118-96-7	5.95E-07
2,4-Dinitrotoluene	121-14-2	5.95E-07
2,6-Dinitrotoluene	606-20-2	5.95E-07
2-Hexanone	591-78-6	5.95E-06
Acetone	67-64-1	5.75E-02
Benzene	71-43-2	7.61E-05
Benzoic Acid	65-85-0	1.97E-04
Benzyl Alcohol	100-51-6	9.88E-04
Bis(2-ethylhexyl)phthalate	117-81-7	1.49E-04
Bromodichloromethane		2.35E-06
Bromoform	75-22-2	2.75E-05
Carbon disulfide		1.61E-05
Carbon Tetrachloride	56-23-5	6.95E-05
Chlorobenzene	106-90-7	3.12E-06
Chloroform	67-66-3	6.36E-05
Chloromethane	74-87-3	8.97E-04
m-Cresol	108-39-4	8.14E-05
o-Cresol	95-48-7	1.99E-04
p-Cresol	106-44-5	9.30E-05
Di(n)octyl phthlate	117-84-0	4.43E-05
Di-n-butyl Phthalate	84-74-2	8.85E-06
Dibromochloromethane	124-48-1	1.66E-06
(cis)1,3-Dichloropropene	542-75-6	6.86E-04
(trans)1,3-Dichloropropene	542-75-6	7.14E-07
Diethyl Phthalate	84-66-2	4.64E-05
Dimethyl Phthalate	131-11-3	1.85E-04
Ethylbenzene	100-41-4	6.18E-06
HMX	2691-41-0	5.95E-07
Methyl chloroform	71-55-6	2.84E-05
Methyl ethyl ketone	78-93-3	2.37E-04
Methyl isobutyl ketone		7.87E-06

Allowable Emission Rates (grams/second)		
Constituent	CAS No.	DUN
Methylene chloride	75-09-2	9.40E-03
Naphthalene	91-20-3	4.86E-06
Nitroglycerine	55-63-0	1.31E-04
Propylene dichloride	78-87-5	7.96E-04
RDX	121-82-4	5.95E-07
Styrene	100-42-5	3.86E-04
Tetrachloroethylene	127-18-4	1.93E-06
Toluene	106-88-3	4.84E-03
Vinyl acetate	108-05-4	1.11E-06
Vinyl chloride	75-01-4	1.59E-05
Total xylene	1330-20-7	6.04E-06
METALS		
Antimony	7440-36-0	2.57E-05
Arsenic	7440-38-2	3.57E-05
Barium	7440-39-3	6.36E-05
Beryllium	7440-41-7	8.45E-06
Boron	7440-42-8	8.50E-04
Cadmium	7440-43-9	1.57E-05
Chromium	7440-47-3	2.33E-05
Cobalt	7440-48-4	1.28E-05
Copper	7440-50-8	1.40E-05
Lead	7439-2-1	8.88E-05
Manganese	7439-96-5	1.15E-03
Mercury	7440-97-6	1.62E-05
Nickel	7440-02-0	5.64E-05
Phosphorous	7440-14-0	5.50E-04
Selenium	7782-49-2	1.71E-05
Silver	7440-22-4	2.57E-05
Tin	7440-31-5	5.79E-05
Thallium	7440-28-0	8.45E-05
Vanadium	7440-62-2	1.72E-05
Zinc	7440-66-6	3.70E-04
ACID GASSES		
Hydrogen Chloride		5.04E-01
Hydrogen Fluoride		1.49E-02
OTHER CONSTITUENTS		
Chlorine		5.49E-03
Particulates		5.51E-02

Table 6-15 DUNNAGE INCINERATOR WASTE FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Shakedown and Post Trial-Burn	Setpoint During Trial Burn
DUN-01	TAHH-42B	Primary chamber temperature high-high	1,950°F	2,050°F
DUN-02	TALL-42B	Primary chamber temperature low-low	1,350°F	1,250°F
DUN-03	BA-420/421 /422/423	Primary chamber flame loss	Flame loss	Flame loss
DUN-04	TALL-56	Afterburner temperature low-low	1,850°F	1,750°F
DUN-05	PAHH-202	Afterburner pressure high-high	-1.0 inch w.c.	-0.5 in. w.c.
DUN-06	BA-429/ 430	Afterburner flame loss	Flame loss	Flame loss
DUN-07	TAH-38B	Afterburner temperature high-high	2,150°F	2,250°F
DUN-08	PdAHH-390	Afterburner flue gas flow rate high	0.5 inch w.c.	0.6 in. w.c.

Table 6-15(Continued) DUNNAGE INCINERATOR WASTE FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Shakedown and Post Trial-Burn	Setpoint During Trial Burn
DUN-09	AAH-254	CO level in flue gas high	100 ppm corrected to 7% O_2 dry basis based on hourly rolling average	100 ppm corrected to 7% O_2 dry basis based on hourly rolling average
DUN-10	ACAM-130	Chemical agent emission high-high based on instantaneous measurements	0.0003 mg/m^3 GB 0.03 mg/m^3 HD 0.0003 mg/m^3 VX	0.0003 mg/m^3 GB 0.03 mg/m^3 HD 0.0003 mg/m^3 VX
DUN-11	TSHH-419	Quench tower exhaust gas temperature high-high[6]	400 F	400 F
DUN-12	PAH-39	Primary chamber pressure high-high	-1.0 inch w.c.	-0.5 in. w.c.
DUN-13	PDAH-166	Baghouse differential pressure high	7 inch w.c.	8 in. w.c.
DUN-14	PDI-166	Baghouse differential pressure low	1 inch w.c.	.05 inch w.c.
DUN-15	PDAR	Feed rates	368 lb/hr total 92 lbs/ 15 min. Surrogate 324 lb/hr total 81 lbs/ 15 min	368 lb/hr total 92 lbs/ 15 min. Surrogate 324 lb/hr total 81 lbs/ 15 min

[6] When the quench tower exhaust gas temperature exceeds high high temperature, the exhaust gas will flow directly to the carbon PAS bypassing the baghouse.

Table 6-15(Continued) DUNNAGE INCINERATOR WASTE FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Shakedown and Post Trial-Burn	Setpoint During Trial Burn
DUN-16	AIT-270	HCl in exhaust gas	112.8 ppm corrected to 7% O_2 on a dry basis	112.8 ppm corrected to 7% O_2 on a dry basis
DUN-17	AIT-253	Oxygen content in afterburner exhaust gas high	14% corrected to a dry basis	14% corrected to a dry basis
DUN-18	AIT-253	Oxygen content in afterburner exhaust gas low	8.5% corrected to a dry basis	8.5% corrected to a dry basis
DUN-19	LAH-55	Quench recirculation tank level high	2 feet 5 inches	2 feet 5 inches
DUN-20	02-112 PDAH-648A/B	Prefilter differential pressure high	10 in. w.c.	10 in. w.c.
DUN-21	02-112 PDAH-650A/B	HEPA filter differential pressure high	10 in. w.c.	10 in. w.c.
DUN-22	TAHH-309	Temperature of gas to carbon filter system	130°F	130°F
DUN-23	MAHH-311	Moisture of gas to carbon filter system	55%	55%
DUN-24	TV-309B	Bypass of carbon filter system	Open	Open

All f[illegible]ral Title 40 CFR citations are Oregon rule as adopted by OAR [illegible]0-100-002

Table 6-16 ALLOWABLE EMISSION RATES

		Emission Rates (g/sec)			
Constituent	CAS No.	LIC	DFS	MPF	DUN
AGENTS					
GB	107-44-8	As measured at the common stack, the combined LIC, DFS, and MPF emission rate must not exceed 4.29E-06.			1.35E-07
VX	50782-69-9	As measured at the common stack, the combined LIC, DFS, and MPF emission rate must not exceed 4.29E-06.			1.35E-07
HD (Mustard)	505-60-2	As measured at the common stack, the combined LIC, DFS, and MPF emission rate must not exceed 4.29E-04.			1.35E-05
ORGANICS					
TEQ 2,3,7,8-PCDF's [Dioxin & Furan congeners]		1.95E-09	6.69E-10	9.08E-10	3.54E-10
Total Polychlorinated Biphenyls [PCB cong]	1336-36-3		6.25E-07		1.36E-07
1,1,2,2-Tetrachloroethane	79-34-5	6.39E-06	7.33E-07	6.98E-07	1.67E-06
1,1-Dichloroethane	75-34-3	3.42E-06	7.33E-07	8.47E-07	4.81E-07
2,4,6-Trinitrotoluene	118-96-7		2.55E-06		5.95E-07
2,4-Dinitrotoluene	121-14-2		2.55E-06		5.95E-07
2,6-Dinitrotoluene	606-20-2		2.55E-06		5.95E-07
2-Hexanone	591-78-6	1.72E-05	7.33E-07	6.98E-07	5.95E-06
Acetone	67-64-1	3.31E-01	7.18E-02	8.34E-05	5.75E-02

All federal Title 40 CFR citations are Oregon rule as adopted by OAR 340-100-002

		Emission Rates (g/sec)			
Constituent	CAS No.	LIC	DFS	MPF	DUN
ORGANICS (continued)					
Benzene	71-43-2	5.77E-04	1.11E-04	3.15E-04	7.61E-05
Benzoic Acid	65-85-0	1.08E-03	3.80E-04	5.91E-04	1.97E-04
Benzyl Alcohol	100-51-6	1.12E-02	2.06E-03	5.94E-03	9.88E-04
Bis(2-ethylhexyl)phthalate	117-81-7	2.59E-03	9.93E-05	1.18E-03	1.49E-04
Bromodichloromethane		3.42E-06	3.31E-06	6.98E-07	2.35E-06
Bromoform	75-22-2	3.18E-05	6.44E-05	4.22E-05	2.75E-05
Carbon disulfide		6.50E-05	7.33E-07	4.09E-05	1.61E-05
Carbon Tetrachloride	56-23-5	2.20E-04	7.33E-07	1.28E-05	6.95E-05
Chlorobenzene	106-90-7	1.67E-05	2.35E-06	1.71E-06	3.12E-06
Chloroform	67-66-3	1.39E-04	8.38E-05	5.88E-06	6.36E-05
Chloromethane	74-87-3	4.99E-03	7.33E-07	2.86E-05	8.97E-04
m-Cresol	108-39-4	1.27E-03	1.02E-05	6.23E-05	8.14E-05
o-Cresol	95-48-7	1.17E-03	1.21E-04	1.94E-03	1.99E-04
p-Cresol	106-44-5	3.94E-04	1.02E-04	6.67E-05	9.30E-05
Di(n)octyl phthlate	117-84-0	1.23E-04	1.02E-05	6.67E-05	4.43E-05
Di-n-butyl Phthalate	84-74-2	6.24E-05	1.10E-05	6.67E-05	8.85E-06
Dibromochloromethane	124-48-1	3.42E-06	4.89E-06	6.98E-07	1.66E-06
(cis)1,3-Dichloropropene	542-75-6	1.62E-03	7.33E-07	6.98E-07	6.86E-04
(trans)1,3-Dichloropropene	542-75-6	3.42E-06	7.33E-07	6.98E-07	7.14E-07
Diethyl Phthalate	84-66-2	2.49E-04	9.93E-06	6.67E-05	4.64E-05
Dimethyl Phthalate	131-11-3	1.77E-03	4.23E-04	1.35E-03	1.85E-04
Ethylbenzene	100-41-4	9.92E-06	2.25E-05	1.64E-06	6.18E-06
HMX	2691-41-0		2.55E-06		5.95E-07
Methyl chloroform	71-55-6	1.66E-04	1.22E-04	1.65E-06	2.84E-05
Methyl ethyl ketone	78-93-3	1.18E-03	7.33E-04	1.58E-04	2.37E-04
Methyl isobutyl ketone		2.21E-05	7.33E-07	6.98E-07	7.87E-06

All f ~al Title 40 CFR citations are Oregon rule as adopted by OAR ~10-100-002

		Emission Rates (g/sec)			
Constituent	CAS No.	LIC	DFS	MPF	DUN
ORGANICS (continued)					
Methylene chloride	75-09-2	3.76E-02	1.20E-02	1.38E-04	9.40E-03
Naphthalene	91-20-3	6.24E-05	1.30E-05	6.67E-05	4.86E-06
Nitroglycerine	55-63-0		5.28E-04		1.31E-04
Propylene dichloride	78-87-5	1.88E-03	7.33E-07	6.98E-07	7.96E-04
RDX	121-82-4		2.55E-06		5.95E-07
Styrene	100-42-5	5.64E-04	1.11E-04	5.24E-05	3.86E-04
Tetrachloroethylene	127-18-4	1.15E-05	7.33E-07	6.98E-07	1.93E-06
Toluene	106-88-3	2.11E-02	6.17E-03	4.15E-05	4.84E-03
Vinyl acetate	108-05-4	4.88E-06	7.33E-07	6.98E-07	1.11E-06
Vinyl chloride	75-01-4	2.95E-05	1.62E-06	5.65E-05	1.59E-05
Total xylene	1330-20-7	4.49E-05	1.58E-05	6.98E-07	6.04E-06
METALS					
Antimony	7440-36-0	1.29E-04	4.19E-05	1.19E-04	2.57E-05
Arsenic	7440-38-2	2.20E-04	4.19E-05	8.51E-05	3.57E-05
Barium	7440-39-3	1.77E-04	8.42E-05	2.35E-04	6.36E-05
Beryllium	7440-41-7	5.82E-05	6.21E-06	2.38E-05	8.45E-06
Boron	7440-42-8	6.34E-03	1.77E-03	2.29E-03	8.50E-04
Cadmium	7440-43-9	5.82E-05	1.87E-05	5.73E-05	1.57E-05
Chromium	7440-47-3	5.82E-05	4.04E-05	6.99E-05	2.33E-05
Cobalt	7440-48-4	7.28E-05	1.68E-05	5.94E-05	1.28E-05
Copper	7440-50-8	7.28E-05	5.39E-05	5.94E-05	1.40E-05
Lead	7439-2-1	3.03E-04	4.42E-04	1.45E-04	8.88E-05
Manganese	7439-96-5	9.45E-03	4.19E-03	1.56E-03	1.15E-03
Mercury	7440-97-6	6.19E-05	5.24E-06	4.28E-05	1.62E-05
Nickel	7440-02-0	3.81E-04	3.05E-05	1.38E-04	5.64E-05
Phosphorous	7440-14-0	4.10E-03	9.35E-04	1.16E-03	5.50E-04

		Emission Rates (g/sec)			
Constituent	CAS No.	LIC	DFS	MPF	DUN
METALS (continued)					
Selenium	7782-49-2	8.85E-05	4.19E-05	7.23E-05	1.71E-05
Silver	7440-22-4	1.29E-04	1.68E-05	1.19E-04	2.57E-05
Tin	7440-31-5	4.57E-04	1.65E-04	1.19E-04	5.79E-05
Thallium	7440-28-0	5.82E-04	8.42E-06	1.19E-05	8.45E-05
Vanadium	7440-62-2	8.85E-05	4.19E-05	2.38E-05	1.72E-05
Zinc	7440-66-6	1.90E-03	8.42E-04	2.09E-04	3.70E-04
ACID GASSES					
Hydrogen Chloride		3.81E-02	1.16E-03	8.16E-03	5.04E-01
Hydrogen Fluoride		1.05E-01	1.66E-02	1.93E-02	1.49E-02
OTHER CONSTITUENTS					
Chlorine		4.57E-02	2.22E-02	2.57E-02	5.49E-03
Particulates		1.08E-01	1.81E-02	5.04E-02	5.51E-02

MODULE VII - INCINERATION - NORMAL OPERATION

Four types of incinerators are used to deactivate and destroy the components of the waste generated from the Chemical Stockpile Disposal Program (CSDP). They are:

Two (2) Liquid Incinerator (LICs),
One (1) Metal Parts Furnace (MPF),
One (1) Deactivation Furnace System (DFS), and
One (1) Dunnage Incinerator (DUN).

All of these incinerators are new and each one is provided with a Pollution Abatement System. One exhaust stack is shared by the LICs, MPF, and DFS (hereafter referred to as "common stack".) Another stack is provided for the DUN incinerator.

Liquid chemical agents drained from munitions, liquid laboratory wastes, and spent decontamination solutions are incinerated in each LIC. Explosives and propellants are incinerated in the DFS. In general, metal parts are decontaminated and detoxified in the MPF. Miscellaneous materials are incinerated in DUN.

This module covers the incineration normal operation periods. For clarity, this module is organized as follows:

Section VII.A. - Conditions Applicable to All Incinerators
Section VII.B. - Liquid Incinerators (LICs)
Section VII.C. - Metal Parts Furnace (MPF)
Section VII.D. - Deactivation Furnace System (DFS)
Section VII.E. - Dunnage Incinerator (DUN)
Section VII.F. - Combined Stack for the LICs, MPF and DFS

VII.A. GENERAL CONDITIONS FOR ALL INCINERATORS AT THE UMCDF SITE

VII.A.1. REQUIREMENTS FOR BEGINNING NORMAL OPERATIONS

Prior to commencing normal operations provided for in Module VII of this permit, all requirements provided in Module VI of this permit shall have been met by the Permittee and approved by the Department, the Trial Burn results and the Post-Trial Burn Risk Assessment provided for in permit condition II.N. shall have been evaluated and approved by the Department, and the applicable numerical values represented with an asterisk (*) in the conditions and tables of Module VII of this permit shall have been established.

VII.A.2. LIMITATION ON WASTE FEED

i. Only one chemical agent, or waste containing one chemical agent, shall be fed to any incinerator, at any given time.

ii. The Permittee shall not incinerate any chemical agent, or any waste containing the chemical agent, in which treatment has not been successfully demonstrated through a chemical agent trial burn, in accordance with Module VI.

VII.A.3. INSPECTION REQUIREMENTS

i. The Permittee shall inspect each incinerator in accordance with the inspection schedule and requirements of Attachment 3 of this permit.

ii. The inspection data for each incinerator shall be recorded, and the records shall be placed in the operating record for the respective incinerator, in accordance with permit condition II.I.

VII.A.4. MONITORING REQUIREMENTS

i. Upon receipt of a written request from the Department, the Permittee shall perform sampling and analysis of the waste and exhaust emissions to verify that the operating requirements established in the permit achieve the performance standards delineated in this permit. [40 CFR 244.347 (a)(3)]

ii. All monitoring, recording, maintenance, calibration and test data shall be recorded and the records for each incinerator shall be placed in the operating record for each respective incinerator, in accordance with permit condition II.I.

iii. The Permittee shall calibrate the oxygen (O_2) and carbon monoxide (CO) continuous emission monitors (CEMS) specified in this permit in accordance with the Performance Specifications for Continuous Emission Monitoring Systems referenced in Part 266 APPENDIX IX.

VII.A.5. REPORTING

i. The Permittee shall submit to the Department an annual report every February first for the previous calendar year, which summarizes the QA/QC reliability problems experienced with Hydrogen Chloride (HCl), carbon monoxide, oxygen, and chemical agent stack gas monitors, chemical agent ventilation system monitors (Laboratory and MDB) and ambient air chemical agent monitors during the previous year. This summary report shall include, but not be limited to, the following:

a. Identification of the monitor experiencing the problem;

b. Identification of the type of problem (e.g., borderline or deficient recoveries, plugging);

c. Date problem experienced;

d. Frequency of problem; and

e. Corrective action implemented to correct the problem, and whether or not or to what degree the corrective action was successful.

ii. The Permittee shall submit a report of all quarterly CEM Calibration Error and annual CEM Performance Specification Tests conducted in accordance with permit condition VII.A.4.iii. within 30 calendar days of the date of the tests.

iii. If any sampling and testing result show that any emission rate specified in Table 7-9 is exceeded, then the Permittee shall notify the Department within 24 hours of the discovery. The Permittee should submit additional risk information to indicate that the increased emission is off-set by decreased emission from another constituent that is expected to be emitted at the same time. Based on the notification and any additional information, the Director may submit in writing direction to the Permittee to stop waste feed to the appropriate incinerators(s). The Permittee shall stop waste feed to the appropriate incinerator(s) in the time specified in writing. Waste feed operation will resume upon written approval from the Department. [40 CFR §270.32(b)(2)].

VII.A.6. CLOSURE

At closure, the Permittee shall follow the procedures in the Closure Plan, Volume XII, Section I of the Application as revised in accordance with permit condition II.J.3.

VII.A.7. RECORDKEEPING

i. The Permittee shall record and maintain, in the operating record for each incinerator, all monitoring and inspection data compiled under the requirements of this permit, in accordance with permit condition II.I.

ii. The Permittee shall record in the operating record the date, time, and duration of all automatic waste feed cutoffs and/or lockouts, including the triggering parameters, reason for the deviation, and corrective measures taken to prevent recurrence of the incident. The Permittee shall also record all incidents of the automatic waste feed cutoff function failures, including the corrective measures taken to correct the condition that caused the failure.

VII.A.8. GENERAL OPERATION

The Permittee shall maintain and operate each incinerator during shakedown, trial burn and post-trial burn periods in accordance with the operating requirements specified in this permit. Each incinerator shall meet the applicable performance standards specified in permit conditions VII.B.2., VII.C.2., VII.D.2., and VII E.2. before entering each incinerator's carbon filter system.

VII.B. LIQUID INCINERATORS (LICs)

Each Liquid Incinerator (LIC) will be installed and used to burn liquid wastes. The LICs are provided with:

A Pollution Abatement System (PAS) that includes a quench tower, venturi scrubber, packed-bed scrubber tower, carbon bed filter and demister.

Both combustion chambers of each LIC are refractory-lined and are equipped with natural gas burners which are used to preheat and to maintain the required combustion temperature in each chamber while burning the liquid wastes. The stack emissions will be continuously monitored for the presence of chemical agents and other emissions. The LIC will shut down automatically when the monitor detects the presence of chemical agent at the allowable stack concentration level. (See permit condition VII.B.2.vii.)

VII.B.1. MAINTENANCE

i. All process monitors required, pursuant to permit condition VII.B.4., shall be equipped with alarms operated to warn of deviation, or imminent deviation, from the limits specified in permit condition VII.B.4.

ii. The Permittee shall install and test all process monitoring and control instrumentation for each LIC in accordance with the design plans in Volume II, Section D-5 and Volume VII, Attachment D-3, Section D-5b of the Application and in accordance with the calibration, performance specifications and maintenance procedures contained in Table 7-1 of this permit.

iii. Modifications to the LIC design plans and specifications in the Application for all incinerators shall be allowed only in accordance with permit condition II.A.2. and II.Q.

iv. The Permittee shall maintain each LIC such that, when operated in accordance with the operating requirements specified in this permit, it will meet the performance standards specified in permit conditions VII.B.2.i. through VII.B.2.vii.

VII.B.2. PERFORMANCE STANDARDS

i. The LIC must achieve and maintain a destruction and removal efficiency (DRE) of 99.9999% for the chemical agent. The DRE shall be calculated by the method specified in 40 CFR §264.343(a)(1).

ii. The particulate matter emissions from the common stack, corrected to 7% oxygen in accordance with the formula given below [40 CFR §264.343 and 40 CFR §270.32(b)(2)], shall not exceed 34.3 mg/dscm (0.015 grains/dscf).

$$P_c = P_m \times 14/(21 - Y)$$

Where: P_c = corrected concentration of particulate matter
P_m = measured concentration of particulate matter
Y = measured O_2 in the stack gas

iii. The hydrogen chloride (HCl) emission from the combined LICs shall not exceed 3.81×10^{-2} grams/second and neither LIC shall exceed 4 pounds/hour individually. [40 CFR §§264.343(b), 270.32(b)(2)]

iv. The emission rates from the combined LICs shall not be exceed the limits specified in Table 7-9. If the Permittee finds that an emission rate for any constituent is exceeded, the Permittee shall notify the Department in accordance with permit condition VII.A.5.iii. The Department may direct the Permittee to cease, and reinitiate waste feed operations for the LICs in accordance with permit condition VII.A.5.iii. [40 CFR §270.32(b)(2)]

v. The above emission limits (Table 7-9) shall be met by limiting the feed rate as specified in permit condition VII.B.3.i.

vi. The Permittee shall control emissions of products of incomplete combustion (PICs) from the common stack such that the carbon monoxide (CO) level in the common stack, corrected to 7% oxygen in accordance with the formula given below, shall not exceed 100 parts per million (ppm), dry volume, over an hourly rolling average. [40 CFR §§264.347(a)(2), 270.32(b)(2)]

$$CO_c = CO_m \times (21 - 7)/(21 - O_m)$$

Where: Co_c = corrected CO ppm (dry volume)
Co_m = measured CO ppm (dry volume)
O_m = measured % O_2 (dry volume)

vii. The Permittee shall continuously monitor emissions of chemical agents from each LIC. The emission levels shall not exceed the following concentrations . [40 CFR §270.32(b)(2)]:

	Chemical Agent - Concentration (mg/m^3)		
	VX	GB	HD
Maximum Instantaneous Allowable Stack Concentration (ASC)	0.0003	0.0003	0.03

viii. Compliance with the operating conditions specified in permit condition VII.B.4. shall be regarded as compliance with the required performance standards identified in permit conditions VII.B.2.i. through VII.B.2.vii. However, if it is determined that during the effective period of this permit that compliance with the operating conditions in permit condition VII.B.4. is not sufficient to ensure compliance with the performance standards specified in permit conditions VII.B.1.i. through VII.B.1.vii., the permit may be modified, revoked, or reissued, pursuant to 40 CFR §270.41. [40 CFR 270.32(b)(2)]

VII.B.3. LIMITATION ON WASTE FEED

i. Except during the short-term periods specified in permit conditions VI.B. for shakedown, trial burn, and post-trial burn, the Permittee shall incinerate only the following hazardous wastes at the stated feed rate in each LIC in compliance with the operating requirements specified in permit condition VII.B.4.

DESCRIPTION OF HAZARDOUS WASTES	MAX. FEED RATE HOURLY ROLLING AVERAGE
Chemical Agents:	
VX	* 680 lbs/hr. *12 lbs/min.
GB	* 1,030 lbs/hr. *18 lbs/min.
HD	* 1,305 lbs/hr. *23 lbs/min.
Surrogate 1,032 lb/hr. 18 lbs/min.	
Decontamination Solution, and Monitoring Support Building and Laboratory, Aqueous Liquid Wastes:	* 2,000 lbs/hr. *34 lbs/min.

METAL FEEDRATES

Arsenic:	1.58E-01* lbs/hr	Lead:	2.18E-01* lbs/hr
Chromium:	4.19E-02* lbs/hr	Mercury:	4.46E-02* lbs/hr
Thallium:	4.19E-01* lbs/hr	Manganese:	6.80E+00* lbs/hr

CHLORINE/CHLORIDE FEEDRATES

Hydrogen Chloride	2.74E-01* lbs/hr
Chlorine	3.29E-01* lbs/hr
Total Chlorine	6.03E-01* lbs/hr

* May be changed due to results of trial burns. (See Module VI)

ii. The spent decontamination solution and the Monitoring Support Building and Laboratory aqueous liquid wastes shall be fed only into the secondary combustion chamber of each LIC with, or without, the chemical agent feed to each LIC primary combustion chamber.

iii. The Permittee shall conduct sufficient analysis of the waste treated in each LIC to verify that the waste feed is within the physical and chemical composition limits specified in this permit, in accordance with the Waste Analysis Plan in Attachment 2 of this permit.

VII.B.4. OPERATING CONDITIONS

i. During normal operations, the Permittee shall operate each LIC in order to maintain the system and process parameters listed in Table 7-1 of this permit within the ranges or setpoints specified in Table 7-1 of this permit.

ii. During normal operations, the Permittee shall operate the AWFCO systems, specified in Table 7-2 of this permit, to automatically cut off and or lock out the hazardous waste feed to each LIC when the monitored operating conditions deviate from the setpoints specified in Table 7-2 of this permit.

VII.B.5. MONITORING REQUIREMENTS

i. The Permittee shall maintain, calibrate, and operate process monitoring, control, and recording equipment as specified in Table 7-1 and 7-2 of this permit, while incinerating hazardous waste.

ii. Hazardous wastes shall not be fed to each LIC if any of the monitoring instruments listed in Table 7-1 and 7-2 of this permit fails to operate properly.

VII.B.6. WASTE FEED CUT-OFF REQUIREMENTS

i. The Permittee shall operate the systems, specified in Table 7-2 of this permit, to automatically cut-off and/or lock-out the hazardous waste feed to each LIC when the monitored operating conditions deviate from the setpoints specified in Table 7-2 of this permit.

ii. The Permittee shall manually cut off and or lock out the waste feed and perform staged shut down of each LIC in accordance with the approved procedures specified in Volume II, Section D-5 and Volume VII, Attachment D-3, Section D-5b of the Application when the operating conditions deviate from the limits specified in permit Condition VII.B.4. unless the deviation automatically activates the waste feed cutoff and/or lock out sequence specified in permit condition VII.B.6.i.

iii. In the event of a malfunction of the AWFCOs listed in Table 7-2 of this permit, the Permittee shall immediately, manually, cut off and/or lockout the waste feed, and perform staged shut down of each LIC in accordance with the approved procedures specified in Volume II, Section D-5 and Volume VII, Attachment D-3, Section D-5b of the Application. The Permittee shall not restart the incinerator until the problem causing the malfunction has been identified and corrected. Waste feed may not restart until the parameter(s) which caused the feed cutoff or lockout is/are restored to permit limits and all other parameters are within permit limits.

iv. If the number of automatic waste feed cutoffs from an individual parameter on Table 7-2 for each LIC is activated greater than twice within any operating day, the Permittee shall be required to, at a minimum, verbally provide to the Department the information required in permit condition VII.A.7.ii by the close of the following business day. After any automatic waste feed cutoff is tripped, the Permittee shall be required to establish and maintain operating limits as specified in Table 7-2 for at least 15 minutes prior to restart of hazardous waste feed to each LIC.

v. If any of the following automatic waste feed cutoffs from Table 7-2, for either LIC occurs at a maximum frequency of five times within 30 LIC operating days in succesession, the Permittee is required to verbally notify the Department of the occurrence and shall require Department approval before waste feed can resume to the LICs in accordance with 40 CFR §270.32(b)(2): Item numbers LIC-01, LIC-03, LIC-06, LIC-09, LIC-10, LIC-11, LIC-12, LIC-15, LIC-16, LIC-17, LIC-18, LIC-22, LIC-24, LIC-26, LIC-27, LIC-28, LIC-30, LIC-31, and LIC-37. These waste feed cutoffs, whether automatically or manually activated, are counted if the specified setpoints are deviated from while waste or waste residues continue to be processed in the incinerator chambers. A cascade event is counted at a frequency of one towards the first waste feed cutoff parameter specified on Table 7-2 which the setpoint is deviated from.

VII.C. METAL PARTS FURNACE (MPF)

The Metal Parts Furnace (MPF) treats drained projectiles, bulk items, mine drums, cyclone residue, carbon High Efficiency Particulate (HEPA) filters and strainers contaminated by chemical agents. No explosives are fed to the MPF. The MPF is a direct-fired roller-hearth furnace with an afterburner. The chemical agent-contaminated metal parts are placed on trays and conveyed through the heated furnace to be pacified and become free of chemical agents. The vaporized chemical agents from the metal parts undergo thermal destruction in the furnace and the afterburner. The Pollution Abatement System is comprised of a quench tower, venturi scrubber, packed scrubber tower, demister and a carbon bed.

VII.C.1. MAINTENANCE

i. All process monitors required, pursuant to permit condition VII.C.4., shall be equipped with alarms operated to warn of deviation, or imminent deviation, from the limits specified in permit condition VII.C.4.

ii. The Permittee shall install and test all process monitoring and control instrumentation for the MPF in accordance with the design plans in Volume II, Section D-6 and Volume VII, Attachment D-3, Section D-6b of the Application and in accordance with the calibration, performance specifications and maintenance procedures contained on Table 7-3 of this permit prior to treating hazardous waste in the MPF.

iii. Modifications to the design plans and specifications in the Application for all incinerators shall be allowed only in accordance with permit condition II.A.2. and II.Q.

VII.C.2. PERFORMANCE STANDARDS

i. The MPF shall achieve and maintain a destruction and removal efficiency (DRE) of 99.99% for the chemical agent. The DRE shall be calculated by the method specified in 40 CFR §264.343(a)(1).

ii. The particulate matter emissions from the common stack, corrected to 7% oxygen in accordance with the formula given below (40 CFR §264.343 and 40 CFR §270.32(b)(2)), shall not exceed 34.3 mg/dscm (0.015 grains/dscf).

$$P_c = P_m \times 14/(21 - Y)$$

Where: P_c = corrected concentration of particulate matter
P_m = measured concentration of particulate matter ppm (dry volume)
Y = measured O_2 in the stack gas

iii. The hydrogen chloride(HCl) emission from the MPF shall not exceed 8.16×10^{-3} grams/second or 4 pounds/hour. [40 CFR §§264.343, 270.32(b)(2)]

iv. The emission rates from the MPF shall not exceed the limits specified in Table 7-9. If the Permittee finds that an emission rate for any constituent is exceeded, the Permittee shall notify the Department in accordance with permit condition VII.A.5.iii. The Department may direct the Permittee to cease, and reinitiate waste feed operations for the MPF in accordance with permit condition VII.A.5.iii. [40 CFR §270.32(b)(2)]

v. The above emission limits shall be met by limiting the feed rates into the MPF as specified in permit conditions VII.C.3.i. [40 CFR §270.32(b)(2)]

vi. The Permittee shall control emission of products of incomplete combustion from the common stack such that the carbon monoxide (CO) level in the common stack, corrected to 7% oxygen in accordance with the formula given below shall not exceed 100 parts per million (ppm), dry volume, over an hourly rolling average.

$$CO_c = CO_m \times (21 - 7)/(21 - O_m)$$

Where:
CO_c = corrected CO ppm (dry volume)
CO_m = measured CO ppm (dry volume)
O_m = measured % O_2 (dry volume)

vii. The Permittee shall continuously monitor emissions of chemical agents from the MPF. The emission level shall not exceed the following concentrations:

	Chemical Agent - Concentration (mg/m^3)		
	VX	GB	HD
Maximum Instantaneous Allowable Stack Concentration (ASC)	0.0003	0.0003	0.03

viii. Compliance with the operating conditions specified in permit condition VII.C.4. shall be regarded as compliance with the required performance standards identified in permit conditions VII.C.2.i. through VII.C.2.vii. However, if it is determined that during the effective period of this permit that compliance with the operating conditions in permit condition VII.B.4. is not sufficient to ensure compliance with the performance standards specified in permit conditions VII.B.1.i. through VII.B.1.vii., the permit may be modified, revoked, or reissued, pursuant to 40 CFR §270.41. [40 CFR 270.32(b)(2)]

VII.C.3. LIMITATION ON WASTE FEED

i. Except during the short-term periods specified in permit conditions VI.C. for shakedown, trial burn, and post-trial burn, the Permittee shall incinerate only the following hazardous wastes at the stated feed rate in the MPF in compliance with the operating requirements specified in permit condition VII.C.4.

Type Munition And Chemical Agent	Maximum Units/Hr*	Feed Interval Per Tray (Min)*	Maximum Weight Per Tray (lb)[7]	Maximum Feed Rate* (lb/hr) VX	GB	HD	Bulk
M 121 A1 Proj,155 MM (VX)	157	18	6990	47.1	-	-	-
M 121 A1 Proj,155 MM (GB)	181	16	6990	-	58.8	-	-
M 426 Proj, 8 inch (VX)	81	20	7660	58.7	-	-	-
M 426 Proj, 8 inch (GB)	97	17	7660	-	70.3	-	-
M23 Mine Drum (VX)(empty)	24	20	2530	12.6	-	-	-
MC-1 Bomb (GB)	7.30	16	2620	-	80.3	-	-
MK-94 Bomb (GB)	7.30	16	2710	-	39.4	-	-
Spray Tank TMU-28 (VX)	1	60	3020	67.8	-	-	-
Ton Container (HD)	1.72	35	3360	-	-	146.2	-
Misc. Metal and Ash	4	15	5250[8]	15	15	26	13000

[7] The maximum weight per tray includes the weight of the tray.
[8] The Permittee shall move trays above the weight limit into the TMA until a plan for treatment has been submitted to and approved by the Department.

Surrogates Maximum feed rate 6607 lbs/hr

METAL FEEDRATES

Arsenic:	6.13E-02* lbs/hr	Lead:	9.20E+00* lbs/hr
Chromium:	1.50E+00* lbs/hr	Mercury:	3.08E-02* lbs/hr
Thallium:	8.57E-03* lbs/hr	Manganese:	1.12E+00* lbs/hr

CHLORINE/CHLORIDE FEEDRATES

Hydrogen Chloride	0.00E+00* lbs/hr
Chlorine	56.0E+00* lbs/hr
Total Chlorine	192.E+00* lbs/hr

*May change due to results of trial burn. (See Module VI)

ii. Throughout operation, the Permittee shall conduct sufficient analysis of the waste treated in the MPF to verify that the waste feed is within the physical and chemical composition limits specified in this permit, in accordance with the Waste Analysis Plan in Attachment 2 of this permit.

iii. The hourly feed rate of the residual chemical agent contained in the MPF feed, which was calculated, assuming a 5% heel, from the amount of chemical agent in the munitions, shall not exceed the limits provided in Table 7-4 and permit condition VII.C.3.i., unless the following conditions are met:

a. The Permittee has provided the Department verbal notice of the following:

(I) The detection of a munition that can not be drained to a 5% or less residual chemical agent heel indicating, its type and its location (i.e., process line leading to furnace, temporary holding location).

(II) The percent chemical agent heel remaining in the munition.

(III) Efforts expended to facilitate additional draining of the munition.

b. The Permittee has provided the Department written procedures for processing of the munition that can not be drained to a 5% or less residual chemical agent heel to reduce its vaporization rate in the MPF to the rate which would be produced by the feedrate allowed in Table 7-4 and permit condition VII.C.3.i. These procedures must be consistent with the procedures specified in Attachment 4 of this permit with the following exceptions:

(I) The temperature and residence time in zones 1,2, and 3 will be specified based on the development of a vaporization curve and calculations for the munition type and the quantity and type of residual chemical agent remaining, which does not exceed the vaporization rate which would be produced by the feedrate allowed in Table 7-4 and permit condition VII.C.3.i. The supporting vaporization curve and calculations shall be provided with the procedures to the Department.

(II) The temperature maintained in the afterburner shall be in accordance with Table 7-4 and permit condition VII.C.3.i.

c. The Permittee receives approved procedures from the Department for processing the munition that cannot be drained to a 5% or less residual chemical agent heel.

VII.C.4. OPERATING CONDITIONS

i. During normal operations, the Permittee shall operate the MPF in order to maintain the system and process parameters listed in Table 7-3 of this permit within the ranges or setpoints specified in Table 7-3 of this permit.

ii. During normal operations, the Permittee shall operate the AWFCO systems, specified in Table 7-4 of this permit, to automatically cut off and or lock out the hazardous waste feed to the MPF when the monitored operating conditions deviate from the setpoints specified in Table 7-4 of this permit.

iii. Only one loaded tray containing the waste materials shall be fed into the MPF at any given time, with a minimum interval between each tray feed as specified in Condition VII.C.3.i.

VII.C.5. MONITORING REQUIREMENTS

i. The Permittee shall maintain, calibrate, and operate process monitoring, control, and recording equipment, as specified in Tables 7-3 and 7-4 of this permit, while incinerating hazardous waste.

ii. Hazardous wastes shall not be fed to the MPF if any of the monitoring instruments listed in Tables 7-3 and 7-4 of this permit fails to operate properly.

VII.C.6. WASTE FEED CUT-OFF REQUIREMENTS

i. The Permittee shall construct and maintain the systems, specified in Table 7-4 of this permit, to automatically cut off and/or lock out the hazardous waste feed to the MPF when the monitored operating conditions deviate from the setpoint specified in Table 7-4 of this permit.

ii. The Permittee shall manually cut off and/or lock out the waste feed and perform staged shut down of the MPF, in accordance with the approved procedures specified in Volume II, Section D-6 and Volume VII, Attachment D-3, Section D-6b of the Application, when the operating conditions deviate from the limits specified in permit condition VII.C.4., unless the deviation automatically activates the waste feed cutoff and/or lockout sequence specified in permit condition VII.C.6.i.

iii. In the event of a malfunction of the AWFCO systems listed in Table 7-4 of this permit, the Permittee shall immediately, manually, cut off and/or lock out the waste feed, and perform staged shut down of the MPF in accordance with the approved procedures specified in Volume II, Section D-6 and Volume VII, Attachment D-3, Section D-6b of the Application. The Permittee shall not restart the incinerator until the problem causing the malfunction has been identified and corrected. Waste feed may not restart until the parameter(s) which caused the feed cutoff or lockout is/are restored to within the permit limits and all other parameters are also within permit limits.

iv. If the number of automatic waste feed cutoffs from an individual parameter on Table 7-4 for the MPF is activated greater than twice within any operating day, the Permittee shall be required to at a minimum verbally provide to the Department the information required in permit condition VII.A.7.ii by the close of the following business day. After any automatic waste feed cutoff is tripped, the Permittee shall be required to establish and maintain operating limits as specified in Table 7-4 for at least 15 minutes prior to restart of hazardous waste feed to the MPF.

v. If any of the following automatic waste feed cutoffs from Table 7-4, for the MPF occurs at a maximum frequency of five times within 30 MPF operating days in succession, the Permittee is required to verbally notify the Department of the occurrence and shall require Department approval before waste feed can resume to the MPF in accordance with 40 CFR §270.32(b)(2): Item numbers MPF-01, MPF-02, MPF-03, MPF-05, MPF-06, MPF-07, MPF-10, MPF-11, MPF-12, MPF-13, MPF-14, MPF-15, MPF-16, MPF-17, MPF-19, MPF-23, MPF-24, MPF-25, MPF-26, MPF-27, MPF-28, MPF-29, and MPF-34. These waste feed cutoffs, whether automatically or manually activated, are counted if the specified setpoints are deviated from while waste or waste residues continue to be processed in the incinerator chambers. A cascade event is counted at a frequency of one towards the first waste feed cutoff parameter specified on Table 7-4 which the setpoint is deviated from.

VII.D. DEACTIVATION FURNACE SYSTEM (DFS)

The DFS incinerates fuzes, explosives and propellants from drained rockets, mines and other munitions. The DFS consists of a rotary kiln, a cyclone, and an afterburner. The chemical agent-contaminated, highly reactive and explosive materials are fed into the retort and deactivated while the vaporized chemical agents undergo thermal destruction in the retort as well as in the afterburner. The Pollution Abatement System is of similar design to that of each LIC and MPF, and consists of a quench tower, venturi scrubber, packed scrubber tower, carbon bed filter, and a demister.

VII.D.1. MAINTENANCE

i. All process monitors required, pursuant to permit condition VII.D.4., shall be equipped with alarms operated to warn of deviation, or imminent deviation, from the limits specified in permit condition VII.D.4.

ii. The Permittee shall install and test all process monitoring and control instrumentation for the DFS in accordance with the design plans in Volume II, Section D-7 and Volume VII, Attachment D-3, Section D-7B of the application and in accordance with the calibration, performance specifications and maintenance procedures contained in Table 7-5 of this permit, prior to handling hazardous waste in the DFS.

iii. Modifications to the design plans and specifications in the Application for all incinerators shall be allowed only in accordance with permit condition II.A.2. and II.Q.

VII.D.2. PERFORMANCE STANDARDS

i. The DFS must achieve and maintain a destruction and removal efficiency (DRE) of 99.99% for the chemical agent. The DRE shall be calculated by the method specified in 40 CFR §264.343(a)(1).

ii. The particulate matter emissions from the common stack, corrected to 7% oxygen in accordance with the formula given below (40 CFR §264.343 and 40 CFR §270.32(b)(2)), shall not exceed 34.3 mg/dscm (0.015 grains/dscf).

$$P_c = P_m \times 14/(21 - Y)$$

Where:
P_c = corrected concentration of particulate matter
P_m = measured concentration of particulate matter ppm (dry volume)
Y = measured O_2 concentration in the stack gas

iii. The hydrogen chloride(HCl) emission from the DFS shall not exceed 1.16×10^{-3} grams per second or 4 pounds/hour. [40 CFR §§264.343(b), 270.32(b)(2)]

iv. The emission rates from the DFS shall not exceed the limits specified in Table 7-9. If the Permittee finds that an emission rate for any constituent is exceeded, the Permittee shall notify the Department in accordance with permit condition VII.A.5.iii. The Department may direct the Permittee to cease, and reinitiate waste feed operations for the DFS in accordance with permit condition VII.A.5.iii. [40 CFR §270.32(b)(2)]

v. The emission limits in Table 7-9 shall be met by limiting the feed rate into the DFS as specified in permit condition VII.D.3.i. [40 CFR §270.32(b)(2)]

vi. The Permittee shall control emission of PICs from the common stack such that the carbon monoxide (CO) level in the common stack, corrected to 7% oxygen in accordance with the formula given below shall, not exceed 100 parts per million (ppm), dry volume, over an hourly rolling average. [40 CFR §§ 264.347(a)(2),270.32(b)(2)]

$$CO_c = CO_m \times (21 - 7)/(21 - O_m)$$

Where: CO_c = corrected CO ppm (dry volume)
CO_m = measured CO ppm (dry volume)
O_m = measured % O_2 (dry volume)

vii. The Permittee shall continuously monitor and control emissions of chemical agents from the DFS. The emission levels shall not exceed the following concentrations [40 CFR §270.32(b)(2)]:

	Chemical Agent - Concentration (mg/m^3)		
	VX	GB	HD
Maximum Instantaneous Allowable Stack Concentration (ASC)	0.0003	0.0003	0.03

viii. Compliance with the operating conditions specified in permit condition VII.D.4. shall be regarded as compliance with the required performance standards identified in permit conditions VII.D.2.i. through VII.D.2.vii. However, if it is determined that during the effective period of this permit that compliance with the operating conditions in permit condition VII.D.4. is not sufficient to ensure compliance with the performance standards specified in permit conditions VII.D.1.i. through VII.D.1.vii., the permit may be modified, revoked, or reissued, pursuant to 40 CFR §270.41. [40 CFR 270.32(b)(2)]

VII.D.3. LIMITATION ON WASTE FEED

i. Except during the short-term periods specified in permit conditions VI.D for shakedown, trial burn, and post-trial burn, the Permittee shall incinerate only the following hazardous wastes at the stated feed rate in the DFS in compliance with the operating requirements specified in permit condition VII.D.4.

Type Munition	Max.	Min.Feed	Maximum Feed Rate(lb/hr)*				
And Chemical Agent	Units/Hr*	Int.(Sec)*	VX	GB	HD	Exp.	Prop.
M 55 Rocket (GB)	40	90	-	21.3	-	123.5	767.7
M 55 Rocket (VX)	40	90	19.9	-	-	123.5	767.7
M121A1 Proj,155 MM(VX)	120	30	-	-	-	327.0	-
M121A1 Proj,155 MM(GB)	120	30	-	-	-	327.0	-
M 426 Proj,8 inch(VX)	47	77	-	-	-	339.8	-
M 426 Proj,8 inch(GB)	47	77	-	-	-	339.8	-
M 23 Landmine(VX)	70	52	36.7	-	-	55.4	-

Surrogates Maximum feed rate 912 lbs/hr

METAL FEEDRATES

Arsenic:	3.02E-02* lbs/hr	Lead:	9.68E-01* lbs/hr
Chromium:	9.69E+00* lbs/hr	Mercury:	3.77E-03* lbs/hr
Thallium:	8.57E-03* lbs/hr	Manganese:	3.02E+00* lbs/hr

CHLORINE/CHLORIDE FEEDRATES

Hydrogen Chloride	1.14E+00* lbs/hr
Chlorine	0.00E+00* lbs/hr
Total Chlorine	1.14E+00* lbs/hr

*May change due to results of trial burns. (See Module VI)

ii. Throughout operation, the Permittee shall conduct sufficient analysis of the waste treated in the DFS to verify that the waste feed is within the physical and chemical composition limits specified in this permit, in accordance with the Waste Analysis Plan in Attachment 2 of this permit.

iii. A time delay of 30 seconds shall be provided for feeding bursters before and after feeding fuses to the DFS, with the exception that nose plugs can be fed with the fuses.

VII.D.4. OPERATING CONDITIONS

i. During normal operations, the Permittee shall operate the DFS in order to maintain the system and process parameters listed in Table 7-5 of this permit within the ranges or setpoints specified in Table 7-5 of this permit.

ii. During normal operations, the Permittee shall operate the AWFCO systems, specified in Table 7-6 of this permit, to automatically cut off and or lock out the hazardous waste feed to the DFS when the monitored operating conditions deviate from the setpoints specified in Table 7-6 of this permit.

iii. The rate of movement of the heated discharge conveyor shall be controlled so as to provide a minimum solid retention time of 15 minutes inside the heated enclosure.

iv. The rocket shear blade will be sprayed with a decontamination solution or process water at all times when a rocket piece is at the blast gate and the shear blade is in operation; or at all times when a rocket piece is at the blast gate and the gate is jammed. The flowrate of the decontamination solution or process water to the rocket shear blade will be continuously monitored and recorded during rocket processing operations. [40 CFR 270.32(b)(2)]

VII.D.5. MONITORING REQUIREMENTS

i. The Permittee shall maintain, calibrate, and operate process monitoring, control, and recording equipment, as specified in Tables 7-5 and 7-6 of this permit, while incinerating hazardous waste.

ii. Hazardous wastes shall not be fed to the DFS if any of the monitoring instruments listed in Tables 7-5 and 7-6 of this permit fails to operate properly.

VII.D.6. WASTE FEED CUT-OFF REQUIREMENTS

i. The Permittee shall construct and maintain the systems, specified in Table 7-6 of this permit, to automatically cut off and/or lock out the hazardous waste feed to the DFS when the monitored operating conditions deviate from the setpoint specified in the Table 7-6 of this permit.

ii. The Permittee shall manually cut off and/or lockout the waste feed and perform staged shut down of the DFS in accordance with the approved procedures specified in Volume II, Section D-7 and Volume VII, Attachment D-3, Section D-7b of the Application when the operating conditions deviate from the limits specified in permit condition VII.D.4. unless the deviation automatically activates the waste feed cutoff and/or lockout sequence specified in permit condition VII.D.6.i.

iii. In case of a malfunction of the automatic waste feed cutoff systems listed in Table 7-6 of this permit, the Permittee shall immediately, manually cut off and/or lock out the waste feed, and perform staged shut down of the DFS in accordance with the approved procedures specified in Volume II, Section D-7 and Volume VII, Attachment D-3, Section D-7b of the Application. The Permittee shall not restart the incinerator until the problem causing the malfunction has been identified and corrected. Waste feed may not restart until the parameter(s) which caused the feed cutoff or lockout is/are restored to permit limits and all other parameters are within permit limits.

iv. If the number of automatic waste feed cutoffs from an individual parameter on Table 7-6 for the DFS is activated greater than twice within any operating day, the Permittee shall be required to at a minimum verbally provide to the Department the information required in permit condition VII.A.7.ii by the close of the following business day. After any automatic waste feed cutoff is tripped, the Permittee shall be required to establish and maintain operating limits as specified in Table 7-6 for at least 15 minutes prior to restart of hazardous waste feed to the DFS.

v. If any of the following automatic waste feed cutoffs from Table 7-6, for the DFS occurs at a maximum frequency of five times within 30 DFS operating days in succession, the Permittee is required to verbally notify the Department of the occurrence and shall require Department approval before waste feed can resume to the DFS in accordance with 40 CFR §270.32(b)(2): Item numbers DFS-02, DFS-03, DFS-05, DFS-07, DFS-08, DFS-11, DFS-12, DFS-13, DFS-14, DFS-15, DFS-16, DFS-17, DFS-18, DFS-19, DFS-20, DFS-21, DFS-25, DFS-27, DFS-28, DFS-29, DFS-30, DFS-31, DFS-34, and DFS-39. These waste feed cutoffs, whether automatically or manually activated, are counted if the specified setpoints are deviated from while waste or waste residues continue to be processed in the incinerator chambers. A cascade event is counted at a frequency of one towards the first waste feed cutoff parameter specified on Table 7-6 which the setpoint is deviated from.

VII.E. DUNNAGE INCINERATOR (DUN)

The DUN is designed to incinerate wood pallets, monitoring support and laboratory solids, carbon, carbon canisters, and other miscellaneous solid wastes, some of which may be contaminated with chemical agents. The DUN consists of two separate chambers, the primary chamber and the afterburner. The primary chamber is provided with a ram feed system capable of handling bulk solid waste.

The pollution abatement system of the DUN consists of a quench tower, a bag house, and a carbon bed filter. The flue gas leaving the DUN stack is continuously monitored for the presence of chemical agents and other emissions.

VII.E.1. MAINTENANCE

i. All process monitors required, pursuant to permit condition VII.E.4., shall be equipped with alarms operated to warn of deviation, or imminent deviation, from the limits specified in permit condition VII.E.4.

ii. The Permittee shall install and test all process monitoring and control instrumentation for the DUN in accordance with the design plans in Volume II, Section D-8 and Volume VII, Attachment D-3, Section D-8b of the Application and in accordance with the performance specifications and maintenance procedures contained in Table 7-7 of this permit.

iii. Modifications to the design plans and specifications in the Application for all incinerators shall be allowed only in accordance with permit condition II.A.2. and II.Q.

iv. The Permittee shall maintain the DUN such that, when operated in accordance with the operating requirements specified in this permit, it will meet the performance standards specified in permit conditions VII.E.2.i. through VII.E.2.vii.

VII.E.2. PERFORMANCE STANDARDS

i. The DUN must achieve and maintain a destruction and removal efficiency (DRE) of 99.99% for the chemical agent. The DRE shall be calculated by the method specified in 40 CFR §264.343(a)(1).

ii. The particulate matter emission from the DUN stack, corrected to 7% oxygen in accordance with the formula given below [40 CFR §264.343 and 40 CFR §270.32(b)(2)], shall not exceed 34.3 mg/dscm (0.015 grains/dscf).

$$P_c = P_m \times 14/(21 - Y)$$

Where: P_c = corrected concentration of particulate matter

P_m = measured concentration of particulate matter ppm (dry volume)

Y = measured O_2 in the stack gas

iii. The hydrogen chloride (HCl) emission from the DUN shall not exceed 5.04×10^{-1} grams per second or 4 pounds/hour. [40 CFR §§264.343(b), 270.32(b)(2)]

iv. The emission rates from the DUN shall not exceed the limits specified in Table 7-9. If the Permittee finds that an emission rate for any constituent is exceeded, the Permittee shall notify the Department in accordance with permit condition VII.A.5.iii. The Department may direct the Permittee to cease, and reinitiate waste feed operations into the DUN in accordance with permit condition VII.A.5.iii. [40 CFR §270.32(b)(2)]

v. The above emission limits shall be met by limiting the overall feed rate into the DUN as specified in permit condition VII.E.3.i. [40 CFR §270.32(b)(2)]

vi. The Permittee must control emission of PICs from the DUN stack such that the CO level in the DUN stack, corrected to 7% oxygen in accordance with the formula given below shall not exceed 100 parts per million (ppm), dry volume, over an hourly rolling average. [40 CFR §§ 264.347(a)(2), 270.32(b)(2)]

$$CO_c = CO_m \times (21 - 7)/(21 - O_m)$$

Where: CO_c = corrected CO ppm (dry volume)
Co_m = measured CO ppm (dry volume)
O_m = measured % O_2 (dry volume)

vii. The Permittee shall continuously monitor emissions of chemical agents from the DUN. The emission levels shall not exceed the following concentrations [40 CFR §270.32(b)(2)]:

	Chemical Agent - Concentration (mg/m^3)		
	VX	GB	HD
Maximum Instantaneous Allowable Stack Concentration (ASC)	0.0003	0.0003	0.03

viii. Compliance with the operating conditions specified in permit condition VII.E.4. shall be regarded as compliance with the required performance standards identified in permit conditions VII.D.E.i. through VII.E.2.vii. However, if it is determined that during the effective period of this permit that compliance with the operating conditions in permit condition VII.E.4. is not sufficient to ensure compliance with the performance standards specified in permit conditions VII.E.1.i. through VII.E.1.vii., the permit may be modified, revoked, or reissued, pursuant to 40 CFR §270.41. [40 CFR 270.32(b)(2)]

VII.E.3. LIMITATION ON WASTE FEED

i. Except during the short-term periods specified in permit conditions VI.E. for shakedown, trial burn, and post-trial burn, the Permittee shall incinerate only the following hazardous wastes at the stated feed rate in the DUN, in compliance with the operating requirements specified in permit condition VII.E.4.

Description of Dunnage	Maximum lb/Hr*	Maximum Feed Rate (lb/hr)* VX	GB	HD
Wood, Carbon Filters, Carbon Canisters, Mine Containers, Lab Solid Waste Paper, or other similar waste	368 not to exceed more than 92 pounds in any 15 minute period	1.7	1.7	1.7

METAL FEEDRATES

Arsenic:	2.19E-03* lbs/hr	Lead:	1.78E-02* lbs/hr
Chromium:	7.29E-04* lbs/hr	Mercury:	5.70E-03* lbs/hr
Thallium:	2.60E-02* lbs/hr	Manganese:	2.81E-01* lbs/hr

CHLORINE/CHLORIDE FEEDRATES

Hydrogen Chloride	3.63E+00* lbs/hr
Chlorine	0.04E+00* lbs/hr
Total Chlorine	3.67E+00* lbs/hr

*May change due to results of trial burn. (See Module VI)

ii. Notwithstanding the waste feed limits specified in permit condition VII.E.3.i., the Permittee shall not feed more than 92 pounds of dunnage into the DUN in any given fifteen-minute period. The frequency of ram feed shall not be more than four (4) times per hour.

iii. Throughout operation, the Permittee shall conduct sufficient analysis of the waste treated in the DUN to verify that the waste feed is within the physical and chemical composition limits specified in this permit, in accordance with the waste analysis plan requirements in Attachment 2 of this permit.

VII.E.4. OPERATING CONDITIONS

i. During normal operations, the Permittee shall operate the DUN in order to maintain the system and process parameters listed in Table 7-7 of this permit within the ranges or setpoints specified in Table 7-7 of this permit.

ii. During normal operations, the Permittee shall operate the AWFCO systems, specified in Table 7-8 of this permit, to automatically cut off and or lock out the hazardous waste feed to the DUN when the monitored operating conditions deviate from the setpoints specified in Table 7-8 of this permit.

iii. Any metal waste fed into the DUN shall remain in the primary chamber, maintained above 1000 °F, for a minimum period of 15 minutes, before discharged from the primary chamber.

iv. The DUN primary chamber shall be operated to minimize residue build-up, including opening the horizontal sliding gate, removing the vertical drop chutes, and waste bin change outs.

VII.E.5. MONITORING REQUIREMENTS

i. The Permittee shall maintain, calibrate, and operate process monitoring, control, and recording equipment as specified in Tables 7-7 and 7-8 of this permit, while incinerating hazardous waste.

ii. Hazardous wastes shall not be fed to the DUN if any of the monitoring instruments listed in Tables 7-7 and 7-8 of this permit fails to operate properly.

VII.E.6. WASTE FEED CUT-OFF REQUIREMENTS

i. The Permittee shall construct and maintain the systems specified in Table 7-8 of this permit, to automatically cut off and/or lock out the hazardous waste feed to the DUN when the monitored operating conditions deviate from the setpoint specified in the Table 7-8 of this permit.

ii. In case of a malfunction of the AWFCO systems listed in Table 7-8 of this permit, the Permittee shall immediately, manually, cut off and/or lock out the waste feed and perform staged shut down of the DUN in accordance with the approved procedures specified in Volume II, Section D-8 and Volume VII, Attachment D-3, Section D-8b of the Application. The Permittee shall not restart the incinerator until the problem causing the malfunction has been identified and corrected. Waste feed may not restart until the parameter(s) which caused the feed cutoff or lock out is/are restored to permit limits and all other parameters are within permit limits.

iii. The Permittee shall manually cut off the waste feed and perform staged shut down of the DUN, in accordance with the approved procedures specified in Volume II, Section D-8 and Volume VII, Attachment D-3, Section D-8b, when the operating conditions deviate from the limits specified in permit condition VII.E.4., unless the deviation automatically activates the waste feed cut-off sequence specified in permit condition VII.E.6.i.

iv. If the number of automatic waste feed cutoffs from an individual parameter on Table 7-8 for the DUN is activated greater than twice within any operating day, the Permittee shall be required to at a minimum verbally provide to the Department the information required in permit condition VII.A.7.ii by the close of the following business day. After any automatic waste feed cutoff is tripped, the Permittee shall be required to establish and maintain operating limits as specified in Table 7-8 for at least 15 minutes prior to restart of hazardous waste feed to the DUN.

v. If the following automatic waste feed cutoffs from Table 7-8, for the DUN occurs at a maximum frequency of five times within 30 DUN operating days in succession, the Permittee is required to verbally notify the Department of the occurrence and shall require Department approval before waste feed can resume to the DUN in accordance with 40 CFR §270.32(b)(2): Item numbers DUN-02, DUN-03, DUN-04, DUN-05, DUN-06, DUN-07, DUN-08, DUN-09, DUN-10, DUN-11, DUN-12, DUN-13, DUN-14, DUN-15, DUN-16, DUN-17, DUN-18, and DUN-24. These waste feed cutoffs, whether automatically or manually activated, are counted if the specified setpoints are deviated from while waste or waste residues continue to be processed in the incinerator chambers. A cascade event is counted at a frequency of one towards the first waste feed cutoff parameter specified on Table 7-8 which the setpoint is deviated from.

VII.F. COMMON STACK FOR LIC, MPF, & DFS

VII.F.1. The Permittee shall install and maintain the CEMs for oxygen, carbon monoxide, and chemical agent, downstream of the LIC, MPF, and DFS pollution abatement system blowers and install and maintain the continuous exhaust gas monitoring systems for NO_x and chemical agent emissions from the common stack.

VII.F.2. The exhaust gas monitoring systems specified in permit condition VII.F.1., shall be calibrated, inspected and operated in accordance with the applicable subparagraphs of permit conditions VII.A.5 and VII.A.6.

VII.F.3. The chemical agent emissions from the common stack, monitored as specified in permit condition VII.F.2., shall not exceed the following concentrations:

	Chemical Agent - Concentration (mg/m^3)		
	VX	GB	HD
Stack Emission	0.0003	0.0003	0.03

VII.F.4. The waste feeds to all contributing incinerator(s) shall be automatically cutoff or locked out when the chemical agent emission level(s) in the common stack exceeds the values specified in permit condition VII.F.3.

TABLE 7-1 LIQUID INCINERATOR SYSTEM INSTRUMENT AND PROCESS PARAMETERS

Item No.	Control Parameter	Measuring Device	Location	Instrument Range	Range or SetPoint	Accuracy	Calibration Method No. and Frequency[a]
1[c]	Fuel Gas to Primary Chamber LIC-FURN-101/201 FIC-120/749	Mass	In-Line	0-2,000 scfh	250-1,250 scfh	±3% of Full Scale	Inst. Calib. Para. 2.3
2[b,c,d]	Chemical Agent from TOX to LIC-FURN-101/201 FIC-127/731	Mass Flowmeter Vibrating U-Tube Type	In-Line	0-2,000 lb/hr	200-1,330 lb/hr	±0.40% of Full Scale	Inst. Calib. Para. 2.3
3[c]	Combustion Air to LIC-FURN-101/201 FFIC-42/743	Annubar & D/P Cell	In-Line	0-250,000 scfh	50,000 to 157,000; scfh	±4% of Full Scale	Inst. Calib. Para 2.3
4[b,c,d]	Spent Decon. To Sec.Chamber LIC-FURN-102/202 FIC-102/763	Mass Flowmeter Vibrating U-tube	In-Line	0-6 gpm	3.3-4.0 gpm	±0.5% of Range	Inst. Calib. Para. 2.3
5[c]	Fuel Gas to Sec.Chamber LIC-FURN-102/202 FIC-70/787	Orifice Plate & D/P Cell	In-Line	0-4,000 scfh	0-3,700 scfh	±3% of Full Scale	Inst. Calib. Para 2.3
6[c]	Combustion Air to LIC-FURN-102/202 FFIC-50/788	Annubar & D/P Cell	In-Line	0-80,000 scfh	15,000-52,000 scfh	±4% of Full Scale	Inst. Calib. Para. 2.3
7[b,c,d]	Primary Chamber LIC-Furn-101/201 Pressure PIC-52/845	Diaphragm	Incinerator	-5 to +1 in. w.c.	-3 to -0.1 in. w.c.	±0.25% of Span	Inst. Calib. Para. 2.2
8[b,c,d]	Primary Chamber LIC-Furn-101/201 Flue Gas Temp. TIC-43/752	Thermo-couple	In-Line	0-4,000 F	2,550-2,850F	±0.375% of Range	Inst. Calib. Para. 2.4
9[b,c,d]	Sec.Chamber LIC-Furn-102/202 Flue Gas Temp. TIC-103/781	Thermo-couple	Incinerator Outlet	0-3,000 F	1,850-2,150F	±0.375% of Range	Inst. Calib. Para. 2.4

Item No.	Control Parameter	Measuring Device	Location	Instrument Range	Range or SetPoint	Accuracy	Calibration Method No. and Frequency[a]
10[c]	Intentionally left blank						
11[b,c,d]	Sec.Chamber LIC-FURN-102/202 Exhaust Gas Flow Rate PDIT-854/855	Orifice & D/P Cell	Online	0-1 in. w.c.	0.7 in. w.c.	±0.5% of Span	Inst. Calib. Para. 2.3
12[c]	Primary Chamber LIC-Furn-101/201 Exhaust Gas O_2 AI-132/756	Zirconium Oxide Cell Analyzer	In-Line (Extractive)	0-25%	8.0 to 12.0%	±2% of Range	Inst. Calib. Para. 1.1 & 1.2
13[c]	Primary Chamber LIC-Furn-101/201 Exhaust Gas CO AI-228/851	Infrared Cell Analyzer	In-Line (Extractive)	0-100 & 0-1,000 ppm	0-50 ppm	±1% of Range	Inst. Calib. Para. 1.1 & 1.2
14[b,c,d]	LIC. Sec. Chamber LIC-Furn-101/201 Exhaust Gas O_2 AI-229/798	Zirconium Oxide Cell Analyzer	In-Line (Extractive)	0-25%	6.0 to 20.8%	±2% of Range	Inst. Calib. Para. 1.1 & 1.2
15[b,c,d]	LIC. Sec. Chamber LIC-Furn-101/201 Exhaust Gas CO AI-83/778	Infrared Cell Analyzer	In-Line (Extractive)	0-100 & 0-1,000 ppm	0-200 ppm	±1% of Range	Inst. Calib. Para. 1.1 & 1.2
16[b,c,d]	Quench Tower PAS-Towr-104/204 Exhaust Gas Temp. high-high TSHHH-396/817	Filled System	In-Line	95 F to 300 F	140 F to 200 F	±1% of Setpoint	Inst. Calib. Para. 2.4
17[b,c,d]	LIC Purge Brine Density DIC-83/835	Magnetically Vibrated Tube	Pump DAS-Pump-211/212 Disch.	30-100 lb/ft^3	62.8-80.0 lb/ft^3	±0.25% of Span	Inst. Calib. Para. 2.5
18[c]	Quench Brine to Quench Tower PAS-TOWR-104/204 FIC-84/827	Electro-magnetic Flowmeter	In-Line	0-150 gpm	80-85 gpm	±0.5% of Range	Inst. Calib. Para. 2.3

Item No.	Control Parameter	Measuring Device	Location	Instrument Range	Range or SetPoint	Accuracy	Calibration Method No. and Frequency[a]
19[b,c,d]	Quench Brine to Venturi Scrubber PAS-SEPA 103/203 FIC-88/828	Electro-magnetic Flowmeter	In-Line	0-200 gpm	100-120 gpm	±0.5% of Range	Inst. Calib. Para. 2.3
20[b,c,d]	Brine Liquor To Scrubber Tower Sprays FIC-112/825	Electro-magnetic Flowmeter	In-Line	0-1,500 gpm	600-800 gpm	±0.5% of Range	Inst. Calib. Para. 2.3
21[c]	Quench Tower PAS-TOWR-104/204 Level LI-132/810	D/P Cell	Vessel	0-36 in. w.c.	6 in. from bottom tangent line to 42 in. from bottom tangent line	±0.25% of Span	Inst. Calib. Para 2.3
22[c]	Scrubber Tower PAS-SCRB-103/203 Tray Level LIC-113/824	D/P Cell	Vessel	0-48 in. w.c.	6 in. above tray to 54 in. above tray	±0.25% of Span	Inst. Calib. Para 2.3
23[c]	Scrubber Tower Bottom Level LIC-115/818	D/P Cell	Vessel	0-60 in. w.c.	24 in. from bottom tangent line to 84 in. from bottom tangent line	±0.25% of Span	Inst. Calib. Para. 2.3
24[c]	Demister Vessel PAS-DMIS-101/201 Bottom Level LIC-143/864	D/P Cell	Vessel	0-12 in. w.c.	8 in. above Vessel bottom to 20 in.above Vessel bottom	±0.25% of Span	Inst. Calib. Para 2.3
25[b,c,d]	Venturi Scrubber Diff. Pres-sure PDIC-90/814	D/P Cell	Venturi Scrubber	0-60 in. w.c.	20-40 in. w.c.	±0.25% of Span	Inst. Calib. Para. 2.3
26[b,c,d]	Brine From Scrubber Tower PAS-SCRB-203 pH AIC-91/831	Electrodes	Discharge From Pump 211/212	0-14 pH units	7.0 to 10.0 pH units	±0.01 pH Unit	Inst. Calib. Para. 2.5
27[c]	Clean Liquor pH AIC-716/832	Electrode	Pump PAS-Pump-213/-214 Disch. to Suction	0-14 pH units	6-10 pH units	±0.01 pH Unit	Inst. Calib. Para. 2.5

Item No.	Control Parameter	Measuring Device	Location	Instrument Range	Range or SetPoint	Accuracy	Calibration Method No. and Frequency[a]
28[c]	Brine Density DIC-117/826	Magnetically Vibrated Tube	Pump PAS-Pump-213/-214 Disch. to Suction	60-100 lb/ft^3	62.0-80 lb/ft^3	1.0% of Span	Inst. Calib. Para 2.5
29[c]	Demister Water pH AI-657/861	Electrodes	Pump PAS-Pump-131/-132 Disch. to Suction	0-14 pH units	7.0-10.0 units	±0.01 pH Unit	Inst. Calib. Para. 2.5
30[c]	Demister PAS-DMIS-101/201 Demist. Element Diff PRL 05 PDI-147/867	D/P Cell	Vessel	0-10 in. w.c.	3-10 in. w.c.	±0.25% of Range	Inst. Calib. Para 2.3
31[b,c,d]	Exhaust Blower PAS-BLOW-104/204 Exhaust Gas CO AI-78/716	Infrared Cell Analyzer	Blower Exhaust Line (Extractive)	0-100 & 0-1,000 ppm	0-50 ppm	±1% of Range	Inst. Calib. Para. 1.1 & 1.2
32[c]	Exhaust Blower PAS-BLOW-104 Exhaust Gas O_2 AI-210/717	Zirconium Oxide Cell Analyzer	Blower Exhaust Line (In-Situ)	0-25%	6.0-18%	±2% of Range	Inst. Calib. Para. 1.1 & 1.2
33[b,c,d]	Exhaust Blower PAS-BLOW-104/204 Exhaust Gas Agent MON ACAM-134/163	Gas Chromatography	Blower Exhaust Line (Extractive)	See Attachment D-2	See Attachment D-2	1% Repeatability	See Attachment D-2
34[b,c,d]	Brine Surge Tanks 101,102,201,202 Level LIT-703/707/03/07	Orifice & D/P Cell	Brine Surge Tanks	0-20 feet	0-18 feet 3 inches	±25% of Span	Inst. Calib. Para. 2.3
35	Scrubber Tower Brine Pressure PIT-100/838	D/P Cell	In-Line	0-25 psig	10-20 psig	±0.25% of Span	Inst. Calib. Para. 2.3
36	Process Water/Spent Decon. Pressure Low PSL-51/765	Diaphragm	In-Line LIC-SEC.	0-200 psig	65 psig	2% of Span	Inst. Calib. Para. 2.2
37	Combustion Air to Sec. Chamber Burner Pressure Low-Low PSLL-200/795	Diaphragm	In-Line LIC-SEC.	0-100 in. w.c.	47 in. w.c.	2% of Span	Inst. Calib. Para. 2.2

Item No.	Control Parameter	Measuring Device	Location	Instrument Range	Range or SetPoint	Accuracy	Calibration Method No. and Frequency[a]
38	Atomizing Air Pressure Low-Low PALL-127A/127B	Diaphragm	In-Line LIC-PRIM.	0-150 psig	12 psig	2% of Span	Inst. Calib. Para. 2.2
39	Brine Surge Tanks Level High-High LSHH-702/706/02/06	Light Signal	Brine Surge Tanks	On/Off	18 ft. 3 in. from bottom	2% of Span	Inst. Calib. Para. 2.3
40[b,c,d]	Sec. Chamber LIC-FURN-102 Pressure PI-888/896	Diaphragm	Incinerator	-5 to +1 in. w.c.	-3 to -0.1 in. w.c.	±0.25% of Span	Inst. Calib. Para. 2.2
41	Presence of Flame Primary Chamber BA-908/912	Flame Detector	Burner	N/A	N/A	N/A	N/A
42	Presence of Flame Sec.Chamber BA-913/914	Flame Detector	Burner	N/A	N/A	N/A	N/A
43[b,c]	PreFilter Pressure 02-112-PDIT-663A/B C/D	D/P Cell	Prefilter	0-20 in. w.c.	5-10 in. w.c.	±1% of Span	Inst. Calib. Para 2.3
44[b,c]	HEPA Filter Pressure 02-112-PDIT-640A/B C/D	D/P Cell	HEPA Filter	0-20 in. w.c.	5-10 in. w.c.	±1% of Span	Inst. Calib. Para 2.3
45[b,c]	Temperature of gas to carbon filter system LIC TAHH 103/577	Thermo-couple	In-Line	95-300°F	50-130°F	±0.375% of Range	Inst. Calib. Para. 2.4
46[b,c]	Moisture of gas to carbon filter system LIC MAHH 104/578	Thermo-couple	In-Line	N/A	N/A	±0.375% of Range	Inst. Calib. Para. 2.4

NOTES:

[a] See Attachment D-1 of the Application for "Process Instrument Calibration," "Oxygen and Carbon Monoxide Analyzer Calibration," and "Quality Assurance/Quality Control Data Forms." See also Operating and QA/QC procedures found in "Laboratory Quality Assurance Program for the Chemical Stockpile Disposal Program, November 1988" and Attachment D-1 of the Application, "Stack Gas Sample Conditioning System." Additional operating and QA/QC procedures for the Automatic Continuous Air Monitoring System (Item No. 33 above) are in Attachments D-2 and F-1 of the Application.

[b] Continuous monitoring.

[c] Continuous recording.

[d] Maintenance, at a minimum, in accordance with equipment manufacturer's recommendations.

D/P = differential pressure
N/A = not applicable

All federal Title 40 CFR citations are Oregon rule as adopted by OAR 340-100-002

TABLE 7-2 LIQUID INCINERATOR WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Normal Operations
LIC-01	PAHH-243/845	Primary chamber pressure high-high	-0.1 inch w.c.
LIC-02	TAH-43/752	Primary chamber exhaust temperature high	* 2,900 °F
LIC-03	TALL-43/752	Primary chamber exhaust temperature low-low	* 2,500 °F
LIC-04	PAL-51/765	Process water/spent decontamination solution feed pressure low	* 65 psig
LIC-05	PALL-760/112	Chemical agent feed pressure low	* 5 psig
LIC-06	TALL-192/782	Secondary chamber exhaust temperature low-low	* 1,800 °F
LIC-07	TAHH-613/713	Secondary chamber temperature high-high	* 2,200 °F
LIC-08	PALL-200/795	Combustion air to secondary chamber burner pressure low-low	36 inches w.c.
LIC-09	PDAH-854/855	Flue gas flow rate in the secondary chamber exhaust high	* 0.5 in w.c.
LIC-10	FDAH-127/731	Chemical agent feed rate high-high based on hourly rolling average (not to exceed 2% of hourly feed rate per min to maintain steady state)	VX *680 lb/hr *12 lb/min GB *1,030 lb/hr *18 lb/min HD *1,305 lb/hr *23 lb/min.

* May be modified due to results from trial burns

TABLE 7-2(Continued) LIQUID INCINERATOR WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Normal Operations
LIC-11	FAHH-102/763	Process water/spent decontamination solution feed rate high-high	* 2,000 lb/hr, *34 lb/min maximum; to be adjusted lower periodically or as necessary to metals and chlorine limitations
LIC-12	AAHH-83/778	Secondary chamber exhaust CO concentration high-high	100 ppm corrected to 7% O_2, dry basis based on hourly rolling average
LIC-13	PALL-127A/ 127B/737A/ 737B	Primary atomizing air pressure low-low	* 12 psig
LIC-14	PAL-809	Secondary atomizing air pressure low-low	* 47 psig
LIC-15	PDIT-90/814	Venturi scrubber pressure drop low-low	* 20 in. w.c.
LIC-16	FAL-112/825	Clean liquor flow rate to scrubber tower low-low	* 690 gpm
LIC-17	AIT-134/163	Chemical agent emission high-high based on instantaneous measurement	0.0003 mg/m^3 GB 0.03 mg/m^3 HD 0.0003 mg/m^3 VX
LIC-18	ACAM-129	Chemical agent emission high-high based on instantaneous measurement at the common stack	0.0003 mg/m^3 GB 0.03 mg/m^3 HD 0.0003 mg/m^3 VX

TABLE 7-2(Continued) LIQUID INCINERATOR WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Normal Operations
LIC-19	LSHH-06 and LSHH-02	Brine surge tanks 101,102,201,202. Both levels high-high	18 feet 3-inch level
LIC-20	AAL-116/832	Clean liquor to scrubber tower pH low	* 7.5
LIC-21	PAL-129/839	Clean liquor to scrubber tower pressure low	* 15 psig
LIC-22	TSHHH-396/ 817	Scrubber inlet temperature (quench tower exhaust gas temperature) high-high-high	* 250 °F
LIC-23	FAL-88/828	Quench brine to venturi scrubber flow rate low	* 100 gpm
LIC-24	DAH-117/826	Brine density high	* 90 lb/ft^3
LIC-25	LSHH-99/820	Scrubber tower sump liquid level high-high	84 inches above bottom tangent line
LIC-26	AIT-229/798	Oxygen concentration in sec. chamber exhaust gas high	* 12% corrected to a dry basis
LIC-27	AIT-229/798	Oxygen concentration in sec. chamber exhaust gas low	* 7% corrected to a dry basis
LIC-28	PSHH-888/896	Secondary chamber pressure high-high	~0.1 inch w.c.
LIC-29	LALL-99/820	Scrubber tower sump level low-low	24 inches above bottom tangent line
LIC-30	BA-908/912	Flame loss in primary chamber burner	Flame loss

* May be modified due to results from trial burns

TABLE 7-2(Continued) LIQUID INCINERATOR WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Normal Operations
LIC-31	BA-913	Flame loss in secondary chamber burner	Flame loss
LIC-32	ZS-567A	Slag discharge gate	Open
LIC-33	02-112-PDIT-663A/B C/D	Prefilter pressure	10 inch w.c.
LIC-34	02-112-PDIT-640A/B C/D	HEPA Filter pressure	10 inch w.c.
LIC-35	TAHH-103/577	Temperature of gas to carbon filter system	130°F
LIC-36	MAHH-104/578	Moisture of gas to carbon filter system	55%
LIC-37	TV-103B/577B	Bypass of carbon filter system	Open

* May be modified due to results from trial burns

TABLE 7-3 METAL PARTS FURNACE INSTRUMENT AND PROCESS PARAMETERS

Item No.	Control Parameter	Measuring Device	Location	Instrument Range	Expected Range	Accuracy	Calibration Method No. and Frequency[a]
1[c]	Fuel Gas to Afterburner MPF-Furn-102 FIC-409/429	Mass Flow	In-Line	0-6,000 scfh	70-4,164 scfh	±3% of Full Scale	Ins. Calib. Para. 2.3
2[c]	Combustion Air to Afterburner MPF-Furn-102 FIC-402/422	Mass Flow	In-Line	0-250,000 scfh	1,980-158,460 scfh	±4% of Full Scale	Inst. Calib. Para. 2.3
3[c]	Fuel Gas to Metal Parts Furnace Zone 1 FIC-209/229/ 249/269	Mass Flow	In-Line	0-3,500 scfh	32-2,060 scfh	±3% of Full Scale	Inst. Calib. Para. 2.3
4[c]	Combustion Air To Metal Parts Furnace Zone 1 FIC-202/222/ 242/262	Mass Flow	In-Line	0-100,000 scfh	932-62,325 scfh	±4% of Full Scale	Inst. Calib. Para. 2.3
5[c]	Fuel Gas to Metal Parts Furnace Zone 2 FIC-289/309/ 329/349	Mass Flow	In-Line	0-3,000 scfh	32-1,810 scfh	±3% of Full Scale	Inst. Calib. Para. 2.3
6[c]	Combustion Air to Metal Parts Furnace Zone 2 FIC-282/302/ 322/342	Mass Flow	In-Line	0-100,000 scfh	932-62,325 scfh	±4% of Full Scale	Inst. Calib. Para. 2.3
7[c]	Fuel Gas to Metal Parts Furnace Zone 3 FIC-369/389	Mass Flow	In-Line	0-1,500 scfh	33-965 scfh	±3% of Full Scale	Inst. Calib. Para. 2.3
8[c]	Combustion Air to Metal Parts Furnace Zone 3 FIC-362/382	Mass Flow	In-Line	0-50,000 scfh	28-31,170 scfh	±4% of Full Scale	Inst. Calib. Para. 2.3
9[b,c,d]	Metal Parts Furnace Zone 1 Temperature TIC-152	Thermocouple	Furnace	0-2,500 F	1,000-1,750 F	±0.375% of Range	Inst. Calib. Para. 2.4

Item No.	Control Parameter	Measuring Device	Location	Instrument Range	Expected Range	Accuracy	Calibration Method No. and Frequency[a]
10[b,c,d]	Metal Parts Furnace Zone 2 Temperature TIC-141	Thermocouple	Furnace	0-2,500 F	1,000-1,750 F	±0.375% of Range	Inst. Calib. Para. 2.4
11[b,c,d]	Metal Parts Furnace Zone 3 Temperature TIC-153	Thermocouple	Furnace	0-2,500 F	1,000-1,750 F	±0.375% of Range	Inst. Calib. Para. 2.4
12[b,c,d]	Afterburner Temperature TIC-65	Thermocouple	Afterburner	0-3,500 F	1,850-2,150 F	±0.375% of Range	Inst. Calib. Para. 2.4
13[c]	Afterburner Pressure PSSH-390	Diaphragm	Afterburner	0 to -5.0 in. w.c.	-2.5 to -4.5 in. w.c.	±0.25% of Range	Inst. Calib. Para. 2.2
14[c]	Metal Parts Furnace MPF-Furn-101 Pressure PIT-34	Diaphragm	Furnace	0 to -4.0 in. w.c.	-0.5 to -1.0 in. w.c.	0.25% of Range	Inst. Calib. Para. 2.2
15[c]	Metal Parts Furnace MPF-Furn-101 Exhaust Gas CO Analysis AIT-508	Infrared Cell Analyzer	Afterburner Exhaust Line (Extractive)	0-100 & 0-1,000 ppm	0-100 ppm	±1% of Range	Inst. Calib. Para. 1.1 & 1.2
16[c]	Metal Parts Furnace MPF-Furn-101 Exhaust Gas O_2 Analysis AIT-33	Zirconium Oxide Cell Analyzer	Afterburner Exhaust Line (Extractive)	0 to 25%	8.0 to 14%	±2% of Range	Inst. Calib. Para. 1.1 & 1.2
17[b,c,d]	Metal Parts Furnace Afterburner Exhaust Gas CO Analysis AIT-384	Infrared Analyzer	Afterburner Exhaust Line (Extractive)	0-100 to 0-1,000 ppm	0-50 ppm	±1.0% of Scale	Inst. Calib. Para. 1.1 & 1.2
18[b,c,d]	Metal Parts Furnace Afterburner Exhaust Gas O_2 Analysis AIT-82	Zirconium Oxide Cell Analyzer	Afterburner Exhaust Line (Extractive)	0 to 25%	6-12%	±2.0% of Range	Inst. Calib. Para. 1.1 & 1.2
19[c]	Quench Tower PAS-TOWR-102 Gas Exhaust Temperature TSHH-223	Filled System	In-Line	95-300 F	140-200 F	±1% of Setpoint	Inst. Calib. Para. 2.4
20[c]	Quench Brine to Quench Tower PAS-TOWR-102 FIC-217	Electro-magnetic Flowmeter	In-Line	70-600 gpm	115-180 gpm	±0.5% of Rate	Inst. Calib. Para. 2.3

Item No.	Control Parameter	Measuring Device	Location	Instrument Range	Expected Range	Accuracy	Calibration Method No. and Frequency[a]
21[c]	Quench Brine to Venturi Scrubber PAS-SEPA-B1 FIC-218	Electro-magnetic Flowmeter	In-Line	100-900 gpm	155-240 gpm	±0.5% of Rate	Inst. Calib. Para. 2.3
22[b,c,d]	Clean Liquor to Scrubber Tower Sprays FIC-248	Electro-magnetic Flowmeter	In-Line	450-3,500 gpm	600-1,500 gpm	±0.5% of Rate	Inst. Calib. Para. 2.3
23[c]	Quench Tower PAS-TOWR-102 Level LI-242	D/P Cell	Vessel	0-36 in. w.c.	6 in. from bottom tangent line to 42 in. from bottom tangent line	±0.25% of Span	Inst. Calib. Para. 2.2
24[d]	Scrubber Tower PAS-SCRB-101 Tray Level LIC-243	D/P Cell	Vessel	0-48 in. w.c.	6 in. above tray to 54 in. above tray	±0.25% of Span	Inst. Calib. Para. 2.2
25[c]	Scrubber Tower Bottom Level LIC-245	D/P Cell	Vessel	0-60 in. w.c.	24 in. above bottom tangent line to 84 in. above bottom tangent line	±0.25% of Span	Inst. Calib. Para. 2.2
26[c]	Demister Vessel PAS-DMIS-103 Bottom Level LIC-293	D/P Cell	Vessel	0-12 in. w.c.	8 in. above vessel bottom to 20 in. above vessel bottom	±0.25% of Span	Inst. Calib. Para. 2.2
27[b,c,d]	Venturi Scrubber Diff Pressure PDIC-222	D/P Cell	Venturi Scrubber	0-60 in. w.c.	20-40 in. w.c.	±0.25% of Span	Inst. Calib. Para. 2.2
28[c]	Brine from Scrubber Tower PAS-SCRB-101 Density DIC-216	Magnetically Vibrated Tube	Pump PAS-Pump-102/103 Disch to Suction	30-150 lb/ft^3	62-80 lb/ft^3	±0.25% of Span	Inst. Calib. Para. 2.5
29[c]	Brine pH from Scrubber Tower PAS-SCRB-101 pH AIC-224 A/B	Electrodes	Pump PAS-Pump-102/103 Disch To Suction	0-14 pH units	5-10 pH units	±0.01 pH Unit	Inst. Calib. Para. 2.5
30[c]	Clean Liquor pH AIC-247	Electrodes	Pump PAS-Pump-104/105 Disch to Suction	0-14 pH units	6-10 pH units	±0.01 pH Unit	Inst. Calib. Para. 2.5

Item No.	Control Parameter	Measuring Device	Location	Instrument Range	Expected Range	Accuracy	Calibration Method No. and Frequency[a]
31[c]	Brine Density DIC-249	Magnetically Vibrated Tube	Pump PAS-Pump-104/105 Disch To Suction	30-150 lb/ft^3	62-80 lb/ft^3	±0.25% of Span	Inst. Calib. Para. 2.5
32[c]	Demister Water pH AI-668	Electrodes		0-14 pH units	1-14 pH units	±0.01 pH Unit	Inst. Calib. Para. 2.5
33[c]	Demister PAS-DMIS-103 Demis Element Diff Press PDI-291	D/P Cell	Vessel	0-10 in. w.c.	3-10 in. w.c.	±0.25% of Span	Inst. Calib. Para. 2.2
34[c]	Blower PAS-BLOW-102 Exhaust Gas CO AI-669	Infrared Cell Analyzer	Blower Exhaust Line (Extractive)	0-100 & 0-1,000 ppm	0-50 ppm	±1% of Range	Inst. Calib. Para. 1.1 & 1.2
35[c]	Blower PAS-BLOW-102 Exhaust Gas O_2 AI-670	Zirconium Oxide Cell Analyzer	Blower Exhaust Line (In-Situ)	0-25%	6-12%	±2% of Range	Inst. Calib. Para. 1.1 & 1.2
36[b,c,d]	Blower PAS-BLOW-102 Exhaust Gas MON ACAM-167	Gas Chromatography	Blower Exhaust Line (Extractive)	Att. D-2	Att. D-2	1% Repeat-ability	Att. D-2
37[c]	Stack PAS-STAK-102 Exhaust Gas Agent MON ACAM-129	Gas Chromatography	Stack (Extractive)	Att. D-2	Att. D-2	1% Repeat-ability	Att. D-2
38[b,c,d]	Metal Parts Furnace Afterburner Exhaust Gas Flow Rate PDIT-786	D/P Cell	Afterburner Exhaust	0-1.0 in. w.c.	0-0.4 in. w.c.	±2% of range	Inst. Calib. Para. 2.2
39[c]	Clean Liquor to Scrubber Tower Pressure PIT-258	D/P Cell	In-Line	0-36 in. w.c.	6 in. from bottom tangent line to 42 in. from bottom tangent line	±0.25% of range	Inst. Calib. Para. 2.2
40[c]	Brine Surge Tanks 101, 102, 201,202 Level LIT-03/07/703/707	Orifice & D/P Cell	Brine Surge Tanks	0-20 ft.	0-18 ft. 0-12 psig	±25% of Span	Inst. Calib. Para. 2.2

Item No.	Control Parameter	Measuring Device	Location	Instrument Range	Expected Range	Accuracy	Calibration Method No. and Frequency[a]
41[b,d]	Natural Gas Pressure PIT-159	Diaphragm	Natural Gas Line	0-50 psig	0-12 psig	±0.25% of Range	Inst. Calib. Para. 2.2
42	Combustion Air Pressure PIC-118	Diaphragm	In-Line	0-50 in. w.c.	10-20 in. w.c.	±0.25% of Range	Inst. Calib. Para. 2.2
43	Presence of Flame Burnout Chamber BA-883-892	Flame Detector	Burner	N/A	N/A	N/A	N/A
44	Presence of Flame Afterburner BA-893, 894	Flame Detector	Burner	N/A	N/A	N/A	N/A
45[b,c]	Prefilter Pressure 02-112-PDIT-642A/B C/D	D/P Cell	Prefilter	0-20 in. w.c.	5-10 in. w.c.	±1% of Span	Inst. Calib. Para 2.3
46[b,c]	HEPA Filter Pressure 02-112-PDIT-642A/B C/D	D/P Cell	HEPA Filter	0-20 in. w.c.	5-10 in. w.c.	±1% of Span	Inst. Calib. Para 2.3
47[b,c]	Temperature of gas to carbon filter system MPF TAHH-425	Thermo-couple	In-Line	95-300°F	50-130°F	±0.375% of Range	Inst. Calib. Para. 2.4
48[b,c]	Moisture of gas to carbon filter system MPF MAHH-494	Thermo-couple	In-Line	N/A	N/A	±0.375% of Range	Inst. Calib. Para. 2.4

NOTES:

[a] See Attachment D-1 of the Application, "Process Instrumentation Calibration," "Oxygen and Carbon Monoxide Analyzer Calibration Procedures," and "QA/QC Data Forms." See also Operating and QA/QC procedures in "Laboratory Quality Assurance Program for the Chemical Stockpile Disposal Program, November 1988" and Attachment D-1, "Stack Gas Sample Conditioning System." Additional operating and QA/QC procedures for Automatic Continuous Air Monitoring System (Item No. "36" and "37" above) are in Attachments D-2 and F-1 of the Application.

[b] Continuous monitoring.

[c] Continuous recording.

[d] Maintenance, at a minimum, in accordance with equipment manufacturer's recommendations.

N/A = not applicable.

TABLE 7-4 METAL PARTS FURNACE WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Normal Operations
MPF-01	TIC-152A	MPF temperature zone 1 high-high	* 1,800 °F for projectiles, 1,600°F ton containers
MPF-02	TIC-141A	MPF temperature zone 2 high-high	* 1,800 °F for projectiles, 1,600°F ton containers
MPF-03	TIC-153A	MPF temperature zone 3 high-high	* 1,800 °F for projectiles, 1,600°F ton containers
MPF-04	PAL-159	Natural gas to MPF pressure low	* 4 psig
MPF-05	TAHH-87	MPF afterburner temperature high-high	* 2,200 °F
MPF-06	TALL-87	MPF afterburner temperature low-low	* 1,800 °F
MPF-07	TAHH-223	Quench tower exhaust gas temperature high-high	* 250 °F
MPF-08	LAHH-244	Scrubber tower sump liquid level high-high	84 in.above bottom tangent line
MPF-09	LALL-246	Scrubber tower sump liquid level low-low	24 in.above bottom tangent line
MPF-10	TIC-152 TIC-141 TIC-153	MPF temperature low-low	* 1,300 °F for projectiles, 1,000°F ton containers 1,100 °F bulk

* May be modified due to results from trial burns

TABLE 7-4 (Continued) METAL PARTS FURNACE WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Normal Operations
MPF-11	PALL-138	Combustion air pressure low-low	* 20 in. w.c.
MPF-12	PDAHH-786	Afterburner flue gas flow rate high-high	* 1.5 in. w.c.
MPF-13	AAH-384	Afterburner exhaust CO concentration high	100 ppm corrected to 7%O_2, dry basis based on 1-hr. rolling average
MPF-14	PDIT-222	Venturi scrubber pressure drop low-low	* 18 in. w.c.
MPF-15	FIT-248	Clean liquor to scrubber tower flow rate low-low	* 600 gpm
MPF-16	AIT-167	Chemical agent emission high-high based on instantaneous measurements	0.0003 mg/m^3 GB 0.03 mg/m^3 HD 0.0003 mg/m^3 VX
MPF-17	ACAM-129	Chemical agent emission high-high based on instantaneous measurements at the common stack	0.0003 mg/m^3 GB 0.03 mg/m^3 HD 0.0003 mg/m^3 VX
MPF-18	LSHH-02/06/702/706	Brine surge tanks 101,102, 201,202. Both levels high-high	18 feet 3-inch level
MPF-19	PAH-70	Burnout chamber pressure high	-0.5 in. w.c.
MPF-20	AIT-247	Clean liquor to scrubber tower pH low	* 7.5
MPF-21	PAL-258	Clean liquor to scrubber tower pressure low	* 15 psig
MPF-22	FAL-218	Quench brine to venturi scrubber flow rate low-low	* 90 gpm

* May be modified due to results from trial burns

TABLE 7-4 (Continued) METAL PARTS FURNACE WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Normal Operations
MPF-23	DAH-249	Brine density high	* 80 lb/ft^3
MPF-24	PDAR	Munitions feed rate high	* M121A1 (GB) 181 mun/hr M121A1 (VX) 157 mun/hr M426 (GB) 97 mun/hr M426 (VX) 81 mun/hr M23 Mine Drum (VX) empty 24 mun/hr MK-94 Bomb (GB) 7.3 mun/hr MC-1 Bomb (GB) 7.3 mun/hr Ton container (HD) 1.72 mun/hr Spray Tank TMU-28 (VX) 1 mun/hr Miscellaneous Metal and Ash 13,000 lb/hr
MPF-25	AIT-82	Oxygen content in afterburner exhaust gas high	* 12% corrected to a dry basis
MPF-26	AIT-82	Oxygen content in afterburner exhaust gas low	* 7.3% corrected to a dry basis
MPF-27	PSHH-390	Afterburner pressure high-high	-0.5 in. w.c.
MPF-28	(10) BA 883-892	Flame loss in burnout chamber	MPF zone 1 all burners out or 1 burner out and zone temperature less than 1400F . MPF zone 2 all burners out or 1 burner out and zone temperature less than 1400F. MPF zone 3 all burners out or 1 burner out and zone temperature less than 1400F.
MPF-29	(2) BA 893/894	Flame loss in afterburner	Flame loss
MPF-30	02-112-PDIT-642A/B C/D	Prefilter pressure	10 inch w.c.

TABLE 7-4 (Continued) METAL PARTS FURNACE WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Normal Operations
MPF-31	02-112-PDIT-642A/B C/D	HEPA filter pressure	10 inch w.c.
MPF-32	TAHH-425	Temperature of gas to carbon filter system	130°F
MPF-33	MAHH-494	Moisture of gas to carbon filter system	*55%
MPF-34	TV-425B	Bypass of carbon filter system	Open

* May be modified due to results from trial burns

TABLE 7-5 DEACTIVATION FURNACE SYSTEM INSTRUMENT AND PROCESS DATA

Item No.	Control Parameter	Measuring Device	Location	Instrument Range	Expected Range or Setpoint	Accuracy	Calibration Method No and Frequency[a]
1[c]	Fuel Gas to Rotary Retort DFS-Furnace 101 FIC-243	Mass Flow	In-Line	0-4,000 scfh	1,953-2,841 scfh	± 0.25% of range	Inst.Calib. Para. 2.3
2[c]	Fuel Gas to Afterburner DFS-Furnace 102 FIC-66, 191	Mass Flow	In-Line	0-12,000 scfh	3,445-8,560 scfh	± 0.25% of range	Inst. Calib. Para. 2.3
3[c]	Combustion Air to Rotary Retort DFS-Furnace 101 FFIC-21	Mass Flow	In-Line	0-220,000 scfh	54,255-149,875 scfh	± 0.25% of range	Inst. Calib. Para. 2.3
4[c]	Combustion Air to Afterburner DFS-Furnace 102 FFIC-78, 79	Mass Flow	In-Line	0-340,000 scfh	95,680-237,740 scfh	± 0.25% of range	Inst. Calib. Para. 2.3
5[b,c,d]	Rotary Retort DFS-Furnace 101 Pressure PIC-18	Diaphragm	Furnace	-5.0 to 1.0 in. w.c.	-0.5 to -2.0 in. w.c.	± 0.2% of span	Inst. Calib. Para. 2.2
6[c]	Rotary Retort DFS-Furnace 101 Temperature TIC-20	Thermocouple	Furnace	0-2,500 F	1,000-1,800 F	± 0.375% of range	Inst. Calib. Para. 2.4
7[c]	Discharge Conveyor Temperature TIC-42, 184	Thermocouple	Conveyor	0-1,600 F	1,000 F	± 0.375% of range	Inst. Calib. Para. 2.4
8[c]	Flue Gas from DFS-Furnace 101 Temperature TIC-8	Thermocouple	In-Line	0-2,500 F	1,000-1,800 F	± 0.375% of range	Inst. Calib. Para. 2.4
9[b,c,d]	Exhaust Gas from Afterburner DFS-Furnace 102 Temperature TIC-92	Thermocouple	In-Line	0-3,500 F	1,850-2,350 F	± 0.375% of range	Inst. Calib. Para. 1.1 & 1.2
10[b,c,d]	Quench Brine to Holding Tank Density DIC-33	Magnetically Vibrated Tube	In-Line	30-120 lb/ft^3	62.4-71.8 lb/ft^3	± 0.25% of range	Inst. Calib. Para. 1.1 & 1.2

Item No.	Control Parameter	Measuring Device	Location	Instrument Range	Expected Range or Setpoint	Accuracy	Calibration Method No and Frequency[a]
11[b,c,d]	Quench Brine to Holding Tank pH AIC-7	Electrodes	Pump PAS-Pump 106/107 Discharge to Suction	0-14 pH units	5-10 pH units	± 0.01 pH unit	Inst. Calib. Para. 2.5
12[b,c,d]	Clean Liquor Density DIC-35	Magnetically Vibrated Tube	Pump PAS-Pump 108/109 Discharge to Suction	50-90 lb/ft^3	62.4-71.8 lb/ft^3	± 0.25% of range	Inst. Calib. Para. 2.5
13[b,c,d]	Clean Liquor pH AIC-34	Electrodes	Clean Liquor Feed Line	0-14 pH units	6-10 pH units	0.01 pH unit	Inst. Calib. Para. 2.5
14[c]	Process Water & Brine to Quench Tower PAS-Tower-103 FIC-02	Electromagnetic Flowmeter	In-Line	0-400 gpm	255 gpm	0.5% of range	Inst. Calib. Para. 2.3
15[b,c,d]	Quench Brine to Venturi Scrubber PAS-SEPA-102 FIC-06	Electromagnetic Flowmeter	In-Line	0-350 gpm	79-198 gpm	0.5% of range	Inst. Calib. Para. 2.3
16[c]	Clean Liquor Return to Srubber Tower PAS SCRUB-102 FIC-30	Electromagnetic Flowmeter	In-Line	0-3,500 gpm	2,141 gpm	0.5% of range	Inst. Calib. Para. 2.3
17[c]	Quench Tower PAS-Tower 103 Level LI-09	Transmitter	Vessel	0-36 in. w.c.	6-42 in. above tangent line	0.2% of span	Inst. Calib. Para. 2.3
18	Scrubber Tower PAS-SCRB-102 Bottom Level LIC-10	Transmitter	Vessel	0-60 in. w.c.	24-84 in. above tangent line	0.2% of span	Inst. Calib. Para. 2.3
19	Scrubber Tower Tray Level LIC-31	Transmitter	Vessel	0-48 in. w.c.	6-54 in. above tangent level	0.2% of span	Inst. Calib. Para. 2.3
20	Demist PAS-DMIS-104 Bottom Level LI-314	Transmitter	Vessel	0-12 in. w.c.	8-20 in. above vessel bottom	0.2% of span	Inst. Calib. Para. 2.3
21	Venturi Scrubber PAS-SEPA-102 Diff. Pressure PDIC-08	Transmitter	Venturi Scrubber	0-60 in. w.c.	20-40 in. w.c.	0.2% of span	Inst. Calib. Para. 2.3

Item No.	Control Parameter	Measuring Device	Location	Instrument Range	Expected Range or Setpoint	Accuracy	Calibration Method No and Frequency[a]
22	Feed Rate to Rotary Retort	PDAR	Control Room	--	38-2,338 lb/hr	--	--
23[c]	Quench Tower Exhaust Gas Temp HH TI-374	Filled System	In-line	95-300 F	140-300 F	± 1.0% setpoint	Inst. Calib. Para. 2.4
24[c]	Afterburner Exhaust Gas Flow Rate PDIT-813	Orifice & D/P Cell	In-line	0-1.0 in. w.c.	0-0.5 in. w.c.	± 0.5% of span	Inst. Calib. Para. 2.3
25[b,c,d]	Afterburner Exhaust Gas O_2 Analyzer AIT-175	Zirconium Oxide Cell Analyzer	In-line (Extractive)	0-25%	6.0 to 20.8%	± 2% of range	Inst. Calib. Para. 1.1 & 1.2
26[b,c,d]	Afterburner Exhaust Gas CO Analyzer AIT-59	Infrared Cell Analyzer	In-line (Extractive)	0-100 & 0-1,000 ppm	0-50 ppm	± 1% of range	Inst. Calib. Para. 1.1 & 1.2
27[c]	Rotary Retort Exhaust Gas O_2 Analyzer AIT-09	Zirconium Oxide Cell Analyzer	In-line (Extractive)	0-25%	6.0 to 20.8%	± 2% of range	Inst. Calib. Para. 1.1 & 1.2
28[c,d]	Brine Surge Tanks 101, 102 201,202 Level LIT-03/07/703/ 707	Orifice & D/P Cell	Brine Surge Tanks	0-20 ft.	0-18 ft.	25% of span	Inst. Calib. Para. 2.3
29[b,c]	Exhaust Blower Gas Agent Mon ACAM-183	Gas Chromatography	Blower Exhaust Line (In-Situ)	See Attach. D-2	Att. D-2	1% repeat-ability	Att. D-2
30	Clean Liquor to Scrubber Tower Pressure Low-Low PIT-36	D/P Cell	In-Line	0-25 psig	10-20 psig	± 1% of span	Inst. Calib. Para. 2.3
31	Rotational Speed ST-98	Transmitter	Retort Drive Motor	0-4 rpm	1-2 rpm	± 1% of range	--
32	Presence of Flame Rotary Retort BA-844	Flame Detector	Burner	N/A	N/A	N/A	N/A
33	Presence of Flame Afterburner BA-850/851	Flame Detector	Burner	N/A	N/A	N/A	N/A

Item No.	Control Parameter	Measuring Device	Location	Instrument Range	Expected Range or Setpoint	Accuracy	Calibration Method No and Frequency[a]
34	Rotary Retort Shell Temperature TE51-A-E	Photometric	Shroud	800-1600 F	1000-1,600 F	±0.5%	Inst. Calib. of span Para. 4
35	Feed Chute Jam Switches XS-207, XS-209	Position Chutes	Feed	N/A	N/A	N/A	N/A
36	Afterburner Pressure PIT-65	D/P Cell	Afterburner	0-1.5 in. w.c.	0.25-1.0 in. w.c.	±0.2% of span	Inst. Calib. Para. 3.1
37	Heated Discharge Conveyor Operation XS-58, XS-821	Position Switches	Heated Discharge Conveyor	N/A	N/A	N/A	N/A
38[a,b,c]	Cyclone Enclosure ACAM-297	Gas Chromato-graphy	Stack	See Attach. D-2	Att. D-2	1% repeat-ability	Att. D-2
39[b,c]	Prefilter Pressure 02-112-PDIT-644A/B C/D	D/P Cell	Prefilter	0-20 in. w.c.	5-10 in. w.c.	±1% of span	Inst. Calib. Para. 2.3
40[b,c]	Hepa filter Pressure 02-112-PDIT-646A/B C/D	D/P Cell	HEPA Filter	0-20 in. w.c.	5-10 in. w.c.	±1% of span	Inst. Calib. Para. 2.3
41[b,c]	Temperature of gas to carbon filter system DFS TAHH-549	Thermo-couple	In-Line	95-300°F	50-130°F	±0.375% of range	Inst. Calib. Para. 2.4
42[b,c]	Moisture of gas to carbon filter system DFS MAHH-550	Thermo-couple	In-Line	N/A	N/A	±0.375% of range	Inst. Calib. Para. 2.4

NOTES:

[a] See Attachment D-1 of the Application, "Process Instrument Calibration," "Oxygen and Carbon Monoxide Analyzer Calibration Procedures," and "QA/QC Data Forms". See also Operating and Quality Assurance/Quality Control (QA/QC) procedures in "Laboratory Quality Assurance Program for the Chemical Stockpile Disposal Program, November 1988" and Attachment D-1 of the Application, "Stack Gas Sample Conditioning System." Additional operating and QA/QC procedures for ACAMS (Item No. "29" and "38" above) are in Attachments D-2 and F-1 of the Application.

[b] Continuous monitoring

[c] Continuous recording

[d] Maintenance at a minimum, in accordance with equipment manufacturer's recommendations.

TABLE 7-6 DEACTIVATION FURNACE SYSTEM WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Normal Operations
DFS-01	TAHH-182	Rotary retort temperature high-high (flue gas temperature before spray)	* 1950 °F
DFS-02	TAHH-08	Flue gas temperature after spray high-high	* 1600 °F
DFS-03	TAL-08	Flue gas temperature after spray low-low	* 750 °F
DFS-04	XS-207 XS-209	Jammed chute	Feed chute filled
DFS-05	PAHH-204	Pressure in rotary retort combustion chamber high-high	-0.05 inch w.c.
DFS-06	TAHH-51A, 51B,51C, 51D, 51E	Temperature on rotary retort shell high-high	* 1600 °F
DFS-07	BA-850/851	Afterburner flame loss	Flame loss
DFS-08	TALL-42	Heated discharge conveyor temperature low-low	* 1000 °F
DFS-09	XS-58 XS-821	Jam in discharge conveyor	Discharge chute filled
DFS-10	SAL-57	No motion on heated discharge conveyor	No motion
DFS-11	PDAH-813	Afterburner exhaust flow rate high	* 1.0 in. w.c.
DFS-12	TALL-182	Rotary Retort Temperature low-low (flue gas temperature before spray)	* 1000 °F except during start-up feed is allowed at 900 °F up to 5 min. to achieve 1,000 °F

Table 7-6(Continued) DEACTIVATION FURNACE SYSTEM WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Normal Operations
DFS-13	TAL-197	Afterburner temperature low-low	* 1,950°F for rockets 1,750°F for other munitions
DFS-14	TAHH-197	Afterburner temperature high-high	* 1,950°F for rockets 1,750°F for other munitions
DFS-15	PDAL-08	Venturi scrubber pressure low-low	* 18 in. w.c.
DFS-16	AAH-59	CO level in flue gas high	100 ppm corrected to 7%O_2, dry basis based on 1-hr. rolling average
DFS-17	PDAR	Munitions feed rate high	* M121A1 (GB) 120 mun/hr M121A1 (VX) 120 mun/hr M426 (GB) 47 mun/hr M426 (VX) 47 mun/hr Land Mine 70 mun/hr M55 (GB) 40 mun/hr M55 (VX) 40 mun/hr
DFS-18	FAL-30	Clean liquor to scrubber tower flow rate low-low	* 540 gpm
DFS-19	AIT-183	Chemical agent emission high-high based on instantaneous measurements	0.0003 mg/m^3 GB 0.03 mg/m^3 HD 0.0003 mg/m^3 VX

* May be modified due to results from trial burns

Table 7-6(Continued) DEACTIVATION FURNACE SYSTEM WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Normal Operations
DFS-20	ACAM-297	Chemical agent emission high-high based on instantaneous measurements in cyclone enclosure	0.0003 mg/m^3 GB 0.03 mg/m^3 HD 0.0003 mg/m^3 VX
DFS-21	ACAM-129	Chemical agent emission high-high based on instantaneous measurements at the common stack	0.0003 mg/m^3 GB 0.03 mg/m^3 HD 0.0003 mg/m^3 VX
DFS-22	LSHH-02/06	Brine surge tanks 101,102, 201,202. Both levels high-high	18 feet 3-inch level
DFS-23	AAL-34	Clean liquor to scrubber tower pH low	* 7.5
DFS-24	PAL-36	Clean liquor to scrubber tower pressure low-low	* 15 psig
DFS-25	TSHHH-375	Quench tower exhaust gas temperature high-high-high	* 250 °F
DFS-26	FAL-06	Quench brine to venturi scrubber flow rate low-low	* 170 gpm
DFS-27	DAH-35	Brine density high	* 90 lb/ft^3
DFS-28	ST-98	Rotational speed	Shall not exceed 2 rpm
DFS-29	AIT-175	Oxygen in afterburner exhaust gas high	* 13% corrected to a dry basis
DFS-30	AIT-175	Oxygen in afterburner exhaust gas low	* 8.8% corrected to a dry basis

* May be modified due to results from trial burns

Table 7-6(Continued) DEACTIVATION FURNACE SYSTEM WASTE-FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Normal Operations
DFS-31	PAH-65	Afterburner pressure high	-0.05 inch w.c.
DFS-32	LAHH-32	Scrubber tower sump level high-high	84 inches above bottom tangent line
DFS-33	LALL-24	Scrubber tower sump level low-low	24 inches above bottom tangent line
DFS-34	BA-844	Flame loss in rotary retort	Flame loss
DFS-35	02-112-PDIT-644A/B C/D	Prefilter pressure	10 inch w.c.
DFS-36	02-112-PDIT-646A/B C/D	HEPA filter pressure	10 inch w.c.
DFS-37	TAHH-549	Temperature of gas to carbon filter system	130°F
DFS-38	MAHH-550	Moisture of gas to carbon filter system	55%
DFS-39	TV-549B	Bypass of carbon filter system	Open

* May be modified due to results from trial burns

TABLE 7-7 DUNNAGE INCINERATOR INSTRUMENT AND PROCESS DATA

Item No.	Control Parameter	Measuring Device	Location	Instrument Range	Expected Range	Accuracy	Calibration Method No. and Frequency[a]
1[c]	Fuel Gas to Dunnage-Afterburner DUN-Furnace 102 Burner No. 1 & 2 FIC-198,385	Mass Flow	In-Line	0-500 scfh	269-301 scfh	± 1% of Span	Inst. Calib. Para. 2.3
2[c]	Fuel Gas to Dunnage Afterburner DUN-Furnace 102 Aux. Burner No. 1,2 FIC-387	Mass Flow	In-Line	0-500 scfh	269-301 scfh	± 1% of Span	Inst. Calib. Para. 2.3
3[c]	Combustion Air to Dunnage Afterburner 102 Burner No. 1 & 2 FFIC 182,383	Mass Flow	In-Line	0-20,000 scfh	8,000-11,510 scfh	± 1% of Span	Inst. Calib. Para. 2.3
4[b,c,d]	Dunnage Afterburner DUN-Furnace 102 Temperature TIC-38	Thermocouple	Furnace	0-3,500°F	1,850-2,150°F	± 0.375% of Range	Inst. Calib. Para. 2.4
5[b,c,d]	Exhaust Gas from Dunnage Afterburner DUN-Furnace 102 O_2 AI-253	Zirconium Oxide Cell Analyzer	Exhaust Gas Line (extractive)	0-25%	10-15%	± 2% of Range	Inst. Calib. Para. 1.1 & 1.2
6[b,c,d]	Exhaust Gas from Dunnage Afterburner DUN-Furnace 102 CO AI-254	Infrared Cell Analyzer	Exhaust Gas Line (extractive)	0-100 ppm	0-50 ppm	± 1% of Range	Inst. Calib. Para. 1.1 & 1.2
7[c]	Dunnage Primary Furnace DUN-Furnace 101 Overfire Air FIC-357	Orifice Plate & D/P	In-Line	0-50,000 scfh	25,960-29,828 scfh	± 3% of Full Scale	Inst. Calib. Para. 2.3

Item No.	Control Parameter	Measuring Device	Location	Instrument Range	Expected Range	Accuracy	Calibration Method No. and Frequency[a]
8[c]	Fuel Gas to Dunnage Primary Furnace DUN-Furnace Burners FIC-118, 138, 158, 178	Mass Flow Meter	In-Line	0-500 scfh	14-300 scfh	± 1% of Span	Inst. Calib. Para. 2.3
9[c]	Combustion Air to Dunnage Primary Furnace DUN-Furnace 101 Burners FFIC-102, 122, 142, 162	Mass Flow Meter	In-Line	0-75,000 scfh	35,205-47,720 scfh	± 1% of Span	Inst. Calib. Para. 2.3
10[b,c,d]	Dunnage Primary Furnace DUN-Furnace 101 Temperature TIC-42	Thermocouple	Furnace	0-2,500°F	1,500-1,800°F	± 0.375% of Range	Inst. Calib. Para. 2.4
11[c]	Dunnage Primary Furnace DUN-Furnace 101 Pressure PIC-39	Diaphragm	Furnace	-5 to 0 in. w.c.	-0.5 to -3.5 in. w.c.	± 0.25% of Span	Inst. Calib. Para. 2.2
12[b,c,d]	Quench Tower PAS-Tower 101 Exhaust Gas Temperature TIC-165	Thermocouple	In-Line	0-600°F	250-400°F	0.375% of Range	Inst. Calib. Para. 2.4
13[c]	Quench Tower PAS Tower 101 Exhaust Gas Hi-Hi Temperature TSHH-419	Filled System	In-Line	250-600°F	250-400°F	± 1% of Setpoint	Inst. Calib. Para. 2.4
14[c]	Quench Tower PAS-Tower 101 Exhaust Gas HCl AI-270	Infrared Cell Analyzer	In-Line (extractive)	0-200 ppm	0-130 ppm	± 1% of Range	Inst. Calib. Para. 1.1 & 1.2

Item No.	Control Parameter	Measuring Device	Location	Instrument Range	Expected Range	Accuracy	Calibration Method No. and Frequency[a]
15[b,c,d]	DUN-Furnace PAS-BLOW-101 Exhaust Gas CO AI-208	Infrared Cell Analyzer	Stack (extractive)	0-100 ppm	0-50 ppm	± 1% of Range	Inst. Calib. Para. 1.1 & 1.2
16[c]	DUN-Furnace PAS-BLOW-101 Exhaust Gas O_2 AI-209	Zirconium Oxide Cell Analyzer	Stack (in Situ)	0-25%	8-10%	± 2% of Range	Inst. Calib. Para. 1.1 & 1.2
17[b,c,d]	DUN-Furnace Stack PAS-STAK-101 Exhaust Gas Chemical Agent MON ACAM-130	Gas Chromatograph	Stack (extractive)	Attachment D-2 of the Application	Attachment D-2 of the Application	± 1% Repeat-ability	Att. D-2
18[c]	Dunnage Feed Rate Monitor PDAR	Hopper Load Cell Ram (or equivalent weighing device with Ram Counter)	Feed to Furnace	0-2,000 lb	50-150 lb	± 1% of Range	--
19[b,c,d]	Dunnage Afterburner Exhaust Gas Flow Rate PDIT-390	Orifice & D/P Cell	In-Line	0-1 in. w.c.	0.5 in.	± 5% of Span	Inst. Calib. Para. 2.3
20	Baghouse Differentia l Pressure PDIT-166	Transmitter	Baghouse	0-20 in. w.c.	5-10 in. w.c.	±1% of Span	Inst. Calib. Para. 2.3
21	Dunnage Afterburner Pressure DUN-Furnace 102 PIT-201	Diaphragm	Afterburner	0 - -5 in. w.c.	-2.5 - -4.5 in w.c.	±0.25% of Range	Inst. Calib. Para. 2.3
22	Natural Gas Pressure DUN-Furnace 101 PIT-354	Diaphragm	Natural Gas Supply Line	0-2 psig	0.5-0.8 psig	±0.25% of Span	Inst. Calib. Para. 2.2
23	Presence of Flame Primary Chamber BE-120, 140, 160, 180	Flame Detector	Burner	N/A	N/A	N/A	N/A

Item No.	Control Parameter	Measuring Device	Location	Instrument Range	Expected Range	Accuracy	Calibration Method No. and Frequency[a]
24	Pressure of Flame Afterburner BE-401, 402	Flame Detector	Burner	N/A	N/A	N/A	N/A
25	Quench Recirculation Tank Level LSHH-55	Differential Pressure Cell	Recirculation Tank	0-72 in. w.c.	9-50 in. w.c.	±0.25% of span	Inst. Calib. Para. 3.1
26[b,c]	Prefilter Pressure 02-112-PDIT-648A/B	D/P Cell	Prefilter	0-20 in. w.c.	5-10 in. w.c.	±1% of span	Inst. Calib. Para. 2.3
27[b,c]	HEPA filter Pressure 02-112-PDIT-650A/B	D/P Cell	HEPA filter	0-20 in. w.c.	5-10 in. w.c.	±1% of span	Inst. Calib. Para. 2.3
28[b,c]	Temperature of gas to carbon filter system DUN TAHH-309	Thermocouple	In-line	95-300°F.	50-130°F	±0.375% of Range	Inst. Calib. Para. 2.4
29[b,c]	Moisture of gas to carbon filter system DUN MAHH-311	Thermocouple	In-line	N/A	N/A	±0.375% of Range	Inst. Calib. Para. 2.4

NOTES:

[a] See Attachment D-1 of the Application for, "Process Instrument Calibration," "Oxygen and Carbon Monoxide Analyzer Calibration Procedures," and "QA/QC Data Forms". Operating and QA/QC procedures in "Laboratory Quality Assurance Program for the Chemical Stockpile Disposal Program, November 1988" and Attachment D-1 of the Application, "Stack Gas Sample Conditioning System." Additional operating and QA/QC procedures for ACAMS (Item No. "17" above) are in Attachments D-2 and F-1 of the Application.

[b] Continuous monitoring

[c] Continuous recording

[d] Maintenance at a minimum, in accordance with the equipment manufacturer's recommendations

TABLE 7-8 DUNNAGE INCINERATOR WASTE FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Normal Operation
DUN-01	TAHH-42B	Primary chamber temperature high-high	* 2,050 °F
DUN-02	TALL-42B	Primary chamber temperature low-low	* 1,250 °F
DUN-03	BA-420/ 421/422/ 423	Primary chamber flame loss	Flame loss
DUN-04	TALL-56	Afterburner temperature low-low	* 1,750 °F
DUN-05	PAHH-202	Afterburner pressure high-high	-1.0 inch w.c.
DUN-06	BA-429/ 430	Afterburner flame loss	Flame loss
DUN-07	TAH-38B	Afterburner temperature high-high	* 2,250 °F
DUN-08	PdAHH-390	Afterburner flue gas flow rate high	* 0.6 in. w.c.
DUN-09	AAH-254	CO level in flue gas high	100 ppm corrected to 7%O_2, dry basis based on 1-hr. rolling average
DUN-10	ACAM-130	Chemical agent emission high-high based on instantaneous measurements	0.0003 mg/m^3 GB 0.03 mg/m^3 HD 0.0003 mg/m^3 VX

* May be modified due to results from trial burns

TABLE 7-8 (Continued) DUNNAGE INCINERATOR WASTE FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Normal Operation
DUN-11	TSHH-419	Quench tower exhaust gas temperature high-high[9]	* 400°F
DUN-12	PAH-39	Primary chamber pressure high-high	* -0.5 in. w.c.
DUN-13	PDAH-166	Baghouse differential pressure high	10 inches w.c.
DUN-14	PDI-166	Baghouse differential pressure low	1 inch w.c. *
DUN-15	PDAR	Feed rates	* 368 lb/hr total *92 lbs/ 15 min. Surrogate 324 lb/hr total 81 lbs/ 15 min
DUN-16	AIT-270	HCl in exhaust gas	112.8 ppm corrected to 7% O_2 on a dry basis
DUN-17	AIT-253	Oxygen content in afterburner exhaust gas high	*14% corrected to a dry basis

* May be modified due to results from trial burns

[9] When the quench tower exhaust gas temperature exceeds high high temperature, the exhaust gas will flow directly to the carbon PAS bypassing the baghouse.

TABLE 7-8 (Continued) DUNNAGE INCINERATOR WASTE FEED CUTOFF PARAMETERS

Item Number	Tag Number	Process Data Description	Setpoints During Normal Operation
DUN-18	AIT-253	Oxygen content in afterburner exhaust gas low	*8.5% corrected to a dry basis
DUN-19	LAH-55	Quench recirculation tank level high	2 feet 5 inches
DUN-20	02-112-PDAH-648A/B	Prefilter differential pressure high	10 in. w.c.
DUN-21	02-112-PDAH-650A/B	HEPA filter differential pressure high	10 in. w.c.
DUN-22	TAHH-309	Temperature of gas to carbon filter system	130°F
DUN-23	MAHH-311	Moisture of gas to carbon filter system	55%
DUN-24	TV-309B	Bypass of carbon filter system	Open

* May be modified due to results from trial burns

TABLE 7-9 MAXIMUM ALLOWABLE EMISSION RATES FOR THE INCINERATORS [40 CFR §270.32(b)(2)]

Allowable Emission Rates					
		Emission Rates (g/sec)			
Constituent	CAS No.	LIC	DFS	MPF	DUN
AGENTS					
GB	107-44-8	As measured at the common stack, the combined LIC, DFS, and MPF emission rate must not exceed 4.29E-06.			1.35E-07
VX	50782-69-9	As measured at the common stack, the combined LIC, DFS, and MPF emission rate must not exceed 4.29E-06.			1.35E-07
HD (Mustard)	505-60-2	As measured at the common stack, the combined LIC, DFS, and MPF emission rate must not exceed 4.29E-04.			1.35E-05
ORGANICS					
TEQ 2,3,7,8-PCDF's [Dioxin & Furan congeners]		*1.95E-09	*6.69E-10	*9.08E-10	*3.54E-10
Total Polychlorinated Biphenyls [PCB cong]	1336-36-3		*6.25E-07		*1.36E-07
1,1,2,2-Tetrachloroethane	79-34-5	*6.39E-06	*7.33E-07	*6.98E-07	*1.67E-06

* To be determined by the results of the Trial Burns. (See Module VI).

Allowable Emission Rates

Constituent	CAS No.	Emission Rates (g/sec) LIC	DFS	MPF	DUN
ORGANICS (continued)					
1,1-Dichloroethane	75-34-3	*3.42E-06	*7.33E-07	*8.47E-07	*4.81E-07
2,4,6-Trinitrotoluene	118-96-7		*2.55E-06		*5.95E-07
2,4-Dinitrotoluene	121-14-2		*2.55E-06		*5.95E-07
2,6-Dinitrotoluene	606-20-2		*2.55E-06		*5.95E-07
2-Hexanone	591-78-6	*1.72E-05	*7.33E-07	*6.98E-07	*5.95E-06
Acetone	67-64-1	*3.31E-01	*7.18E-02	*8.34E-05	*5.75E-02
Benzene	71-43-2	*5.77E-04	*1.11E-04	*3.15E-04	*7.61E-05
Benzoic Acid	65-85-0	*1.08E-03	*3.80E-04	*5.91E-04	*1.97E-04
Benzyl Alcohol	100-51-6	*1.12E-02	*2.06E-03	*5.94E-03	*9.88E-04
Bis(2-ethylhexyl)phthalate	117-81-7	*2.59E-03	*9.93E-05	*1.18E-03	*1.49E-04
Bromodichloromethane		*3.42E-06	*3.31E-06	*6.98E-07	*2.35E-06
Bromoform	75-22-2	*3.18E-05	*6.44E-05	*4.22E-05	*2.75E-05
Carbon disulfide		*6.50E-05	*7.33E-07	*4.09E-05	*1.61E-05
Carbon Tetrachloride	56-23-5	*2.20E-04	*7.33E-07	*1.28E-05	*6.95E-05
Chlorobenzene	106-90-7	*1.67E-05	*2.35E-06	*1.71E-06	*3.12E-06
Chloroform	67-66-3	*1.39E-04	*8.38E-05	*5.88E-06	*6.36E-05
Chloromethane	74-87-3	*4.99E-03	*7.33E-07	*2.86E-05	*8.97E-04
m-Cresol	108-39-4	*1.27E-03	*1.02E-05	*6.23E-05	*8.14E-05
o-Cresol	95-48-7	*1.17E-03	*1.21E-04	*1.94E-03	*1.99E-04
p-Cresol	106-44-5	*3.94E-04	*1.02E-04	*6.67E-05	*9.30E-05
Di(n)octyl phthlate	117-84-0	*1.23E-04	*1.02E-05	*6.67E-05	*4.43E-05
Di-n-butyl Phthalate	84-74-2	*6.24E-05	*1.10E-05	*6.67E-05	*8.85E-06

* To be determined by the results of the Trial Burns. (See Module VI).

Allowable Emission Rates

		Emission Rates (g/sec)			
Constituent	CAS No.	LIC	DFS	MPF	DUN
ORGANICS (continued)					
Dibromochloromethane	124-48-1	*3.42E-06	*4.89E-06	*6.98E-07	*1.66E-06
(cis)1,3-Dichloropropene	542-75-6	*1.62E-03	*7.33E-07	*6.98E-07	*6.86E-04
(trans)1,3-Dichloropropene	542-75-6	*3.42E-06	*7.33E-07	*6.98E-07	*7.14E-07
Diethyl Phthalate	84-66-2	*2.49E-04	*9.93E-06	*6.67E-05	*4.64E-05
Dimethyl Phthalate	131-11-3	*1.77E-03	*4.23E-04	*1.35E-03	*1.85E-04
Ethylbenzene	100-41-4	*9.92E-06	*2.25E-05	*1.64E-06	*6.18E-06
HMX	2691-41-0		*2.55E-06		*5.95E-07
Methyl chloroform	71-55-6	*1.66E-04	*1.22E-04	*1.65E-06	*2.84E-05
Methyl ethyl ketone	78-93-3	*1.18E-03	*7.33E-04	*1.58E-04	*2.37E-04
Methyl isobutyl ketone		*2.21E-05	*7.33E-07	*6.98E-07	*7.87E-06
Methylene chloride	75-09-2	*3.76E-02	*1.20E-02	*1.38E-04	*9.40E-03
Naphthalene	91-20-3	*6.24E-05	*1.30E-05	*6.67E-05	*4.86E-06
Nitroglycerine	55-63-0		*5.28E-04		*1.31E-04
Propylene dichloride	78-87-5	*1.88E-03	*7.33E-07	*6.98E-07	*7.96E-04
RDX	121-82-4		*2.55E-06		*5.95E-07
Styrene	100-42-5	*5.64E-04	*1.11E-04	*5.24E-05	*3.86E-04
Tetrachloroethylene	127-18-4	*1.15E-05	*7.33E-07	*6.98E-07	*1.93E-06
Toluene	106-88-3	*2.11E-02	*6.17E-03	*4.15E-05	*4.84E-03
Vinyl acetate	108-05-4	*4.88E-06	*7.33E-07	*6.98E-07	*1.11E-06
Vinyl chloride	75-01-4	*2.95E-05	*1.62E-06	*5.65E-05	*1.59E-05
Total xylene	1330-20-7	*4.49E-05	*1.58E-05	*6.98E-07	*6.04E-06

* To be determined by the results of the Trial Burns. (See Module VI).

Allowable Emission Rates

Constituent	CAS No.	Emission Rates (g/sec) LIC	DFS	MPF	DUN
METALS					
Antimony	7440-36-0	*1.29E-04	*4.19E-05	*1.19E-04	*2.57E-05
Arsenic	7440-38-2	*2.20E-04	*4.19E-05	*8.51E-05	*3.57E-05
Barium	7440-39-3	*1.77E-04	*8.42E-05	*2.35E-04	*6.36E-05
Beryllium	7440-41-7	*5.82E-05	*6.21E-06	*2.38E-05	*8.45E-06
Boron	7440-42-8	*6.34E-03	*1.77E-03	*2.29E-03	*8.50E-04
Cadmium	7440-43-9	*5.82E-05	*1.87E-05	*5.73E-05	*1.57E-05
Chromium	7440-47-3	*5.82E-05	*4.04E-05	*6.99E-05	*2.33E-05
Cobalt	7440-48-4	*7.28E-05	*1.68E-05	*5.94E-05	*1.28E-05
Copper	7440-50-8	*7.28E-05	*5.39E-05	*5.94E-05	*1.40E-05
Lead	7439-2-1	*3.03E-04	*4.42E-04	*1.45E-04	*8.88E-05
Manganese	7439-96-5	*9.45E-03	*4.19E-03	*1.56E-03	*1.15E-03
Mercury	7440-97-6	*6.19E-05	*5.24E-06	*4.28E-05	*1.62E-05
Nickel	7440-02-0	*3.81E-04	*3.05E-05	*1.38E-04	*5.64E-05
Phosphorous	7440-14-0	*4.10E-03	*9.35E-04	*1.16E-03	*5.50E-04
Selenium	7782-49-2	*8.85E-05	*4.19E-05	*7.23E-05	*1.71E-05
Silver	7440-22-4	*1.29E-04	*1.68E-05	*1.19E-04	*2.57E-05
Tin	7440-31-5	*4.57E-04	*1.65E-04	*1.19E-04	*5.79E-05
Thallium	7440-28-0	*5.82E-04	*8.42E-06	*1.19E-05	*8.45E-05
Vanadium	7440-62-2	*8.85E-05	*4.19E-05	*2.38E-05	*1.72E-05
Zinc	7440-66-6	*1.90E-03	*8.42E-04	*2.09E-04	*3.70E-04
ACID GASSES					
Hydrogen Chloride		*3.81E-02	*1.16E-03	*8.16E-03	*5.04E-01
Hydrogen Fluoride		*1.05E-01	*1.66E-02	*1.93E-02	*1.49E-02
OTHER CONSTITUENTS					
Chlorine		*4.57E-02	*2.22E-02	*2.57E-02	*5.49E-03
Particulates		*1.08E-01	*1.81E-02	*5.04E-02	*5.51E-02

* To be determined by the results of the Trial Burns. (See Module VI).

MODULE VIII - CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS

VIII.A. CERCLA SECTION 120 FEDERAL FACILITY AGREEMENT (FFA)

VIII.A.1. ORS 466.105(10) and 40 CFR §264.101, adopted as Oregon rule at OAR 340-100-002, require corrective action to protect human health and the environment for all releases of hazardous waste or hazardous constituents from any solid waste management unit(SWMU) at a facility seeking a permit pursuant to ORS 466.

Under the Federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), a Federal Facility Agreement(FFA) under CERCLA Section 120(e)(2) is another authority used to investigate and clean up known and past releases of hazardous wastes and constituents to protect human health and the environment. All investigations and cleanups included in a FFA will meet or exceed all applicable or relevant and appropriate state and federal requirements to the extent required by Section 121 of CERCLA, 42 U.S.C. §9621.

VIII.A.2. The corrective action for the Umatilla Chemical Depot will be satisfied by the FFA, which was dated September 19, 1989, and became effective on October 31, 1989. The FFA is hereby made a condition of this permit. Inclusion of this provision in the permit is not intended to modify in any fashion any term, condition, or requirement of the FFA. The corrective action of 40 CFR 264.101 will be satisfied by the FFA, except for:

i. Any newly identified SWMU's that were not identified in the final CERCLA Record of Decisions for the Umatilla Depot;

ii. Those SMWU's that are discovered after the termination of the FFA, which are subject to permit condition VIII.A.3.

VIII.A.3. NOTIFICATION OF NEWLY IDENTIFIED SWMU'S TO DEPARTMENT

i. The Permittee shall notify the Department in writing of any newly-identified SWMU(s)(i.e., a unit not specifically identified during the RFA), discovered during the course of groundwater monitoring, field investigations, environmental audits, or other means, no later than fifteen(15) calendar days after discovery.

ii. After such notification, the Department may request, in writing, that the Permittee prepare a Solid Waste Management Unit (SWMU) Assessment Plan and a proposed schedule of implementation and completion of the Plan for any additional SWMU(s) discovered subsequent to the issuance of this Permit.

iii. Within ninety (90) calendar days after receipt of the Department's request for a SWMU Assessment Plan, the Permittee shall prepare a SWMU Assessment Plan for determining past and present operations at the unit, as well as any sampling and analysis of ground water, land surface and subsurface strata, surface water or air, as necessary to determine whether a release of hazardous waste including hazardous constituents from such unit(s) has occurred, is likely to have occurred, or is likely to occur. The SWMU Assessment Plan must demonstrate that the sampling and analysis program, if applicable, is capable of yielding representative samples and must include parameters sufficient to identify migration of hazardous waste including hazardous constituents from the newly-discovered SWMU(s) to the environment.

iv. After the Permittee submits the SWMU Assessment Plan, the Department shall either approve or disapprove the Plan in writing.

If the Department approves the Plan, the Permittee shall begin to implement the Plan within fifteen (15) calendar days of receiving such written notification.

If the Department disapproves the Plan, the Department shall either (1) notify the Permittee in writing of the Plan's deficiencies and specify a due date for submittal of a revised Plan, or (2) revise the Plan and notify the Permittee of the revisions. This Department-revised Plan becomes the approved SWMU Assessment Plan. The Permittee shall implement the Plan within fifteen (15) calendar days of receiving written approval.

v. The Permittee shall submit a SWMU Assessment Report to the Department no later than twenty-five (25) calendar days from completion of the work specified in the approved SWMU Assessment Plan. The SWMU Assessment Report shall describe all results obtained from the implementation of the approved SWMU Assessment Plan. At a minimum, the Report shall provide the following information for each newly-identified SWMU:

a. The location of the newly-identified SWMU in relation to other SWMUs;

b. The type and function of the unit;

c. The general dimensions, capacities, and structural description of the unit (supply any available drawings);

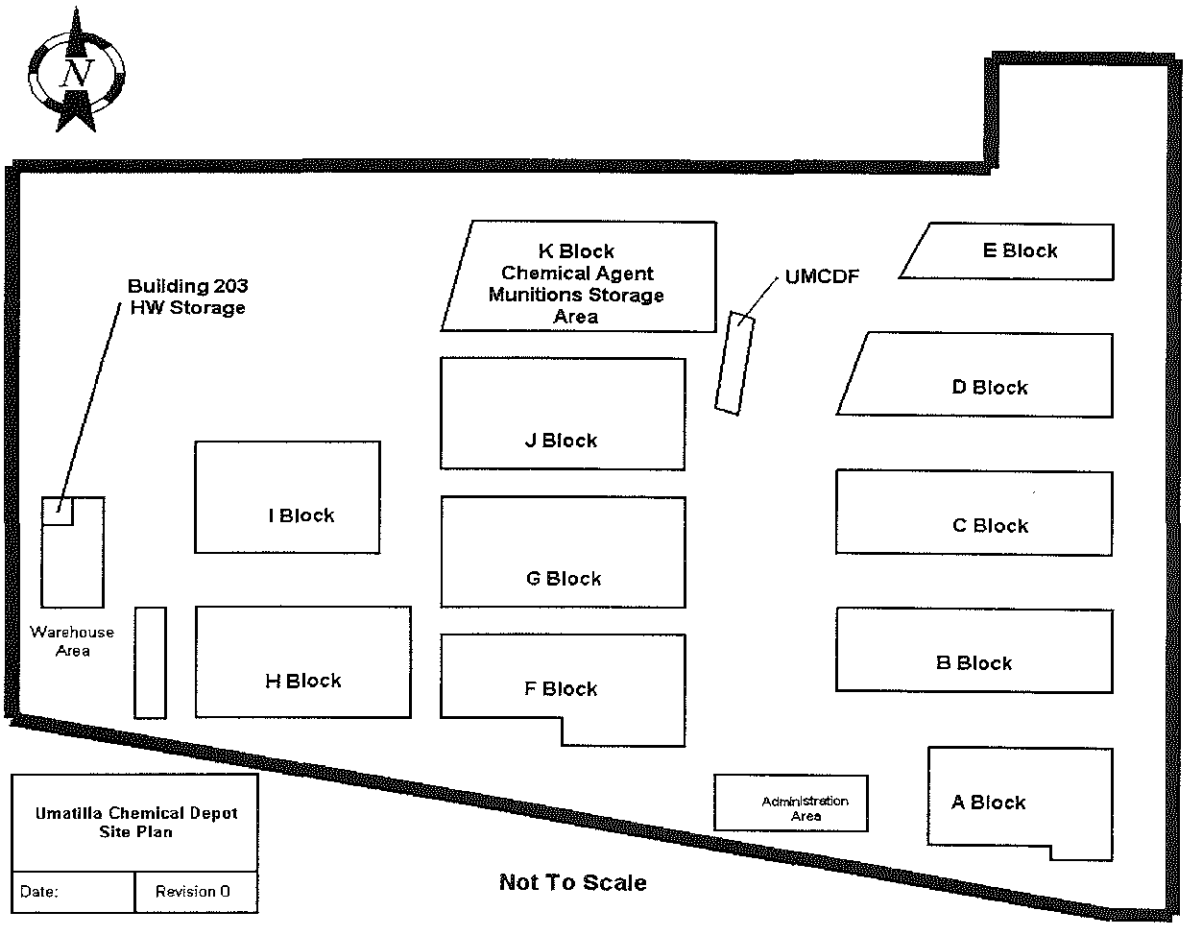
d. The period during which the unit was operated;

e. The complete characterization of all wastes that have been or are being managed at the SWMU, to the extent available; and

f. The results of any sampling and analysis required for the purpose of determining whether releases of hazardous wastes including hazardous constituents have occurred, are occurring, or are likely to occur from the unit.

vi. Based on the results of this Report, the Department shall determine the need for further investigations at specific unit(s) covered in the SWMU Assessment. If the Department determines that such investigations are needed, the Department may require the Permittee to prepare a plan to investigate and characterize in more detail the SWMU and releases from the SWMU(s). The Permittee must submit the plan within the time specified by the Department as a permit modification pursuant to 40 CFR §270.42.

FIGURE 1


N
Building 203
HW Storage
K Block
Chemical Agent
Munitions Storage
Area
UMCDF
E Block
D Block
J Block
I Block
C Block
G Block
Warehouse
Area
B Block
H Block
F Block
Administration
Area
A Block
Umatilla Chemical Depot
Site Plan
Date:
Revision 0
Not To Scale

ATTACHMENT 1

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

Form Approved. OMB No. 2050-0034 Expires 12-31-91
GSA No. 0246-EPA-OT

For EPA Regional Use Only

Date Received
Month Day Year

EPA

United States Environmental Protection Agency
Washington, DC 20460

Hazardous Waste Permit Application Part A

Read the Instructions before starting.

For State Use Only

I. ID Number(s)

A. EPA ID Number	B. Secondary ID Number (if applicable)
O R 6 2 1 3 8 2 0 9 1 7	

II. Name of Facility

U M A T I L L A D E P O T A C T I V - C D F *

III. Facility Location (Physical address; not P.O. Box or Route Number)

A. Street

I N T E R S T A T E H W Y - 8 4 A T E X I T 1 7 7

Street (continued)

City or Town	State	ZIP Code
H E R M I S T O N	O R	9 7 8 3 8 - 9 5 4 4

County Code (If known)	County Name
	U M A T I L L A / M O R R O W

B. Land Type (enter code)	C. Geographic Location: LATITUDE (degrees, minutes, & seconds)	LONGITUDE (degrees, minutes, & seconds)	D. Facility Existence Date: Month Day Year
F	4 5 5 0 3 0 N	1 1 9 2 6 0 0 W	1 0 1 4 1 9 4 1

IV. Facility Mailing Address

Street or P.O. Box

U M A T I L L A A R M Y D E P O T A C T I V I T Y

City or Town	State	ZIP Code
H E R M I S T O N	O R	9 7 8 3 8 - 9 5 4 4

V. Facility Contact (Person to be contacted regarding waste activities at facility)

Name (last)	(first)
R I T C H I E	P A T R I C K

Job Title	Phone Number (area code and number)
C H I E F - E N V & S A F E T Y	5 0 3 - 5 6 4 - 5 2 9 4

VI. Facility Contact Address (See Instructions)

Contact Address Location: Mailing	B. Street or P.O. Box
X	U. S. A R M Y D E P O T A C T I V I T Y

City or Town	State	ZIP Code

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Form Approved. OMB No. 2050-0034 Expires 12-31-91
GSA No. 0248-EPA-OT

EPA I.D. Number *(enter from page 1)*: OR6213820917

Secondary ID Number *(enter from page 1)*:

VII. Operator Information *(see instructions)*

Name of Operator: SEE IXI

Street or P.O. Box:

City or Town:

State:

ZIP Code:

Phone Number *(area code and number)*:

B. Operator Type:

C. Change of Operator Indicator: Yes ☐ No ☐

Date Changed Month / Day / Year:

VIII. Facility Owner *(see instructions)*

A. Name of Facility's Legal Owner: U.S. DEPT. OF ARMY - UMATILLA DEPOT ACTIVIT

Street or P.O. Box: UMATILLA DEPOT ACTIVITY

City or Town: HERMISTON

State: OR

ZIP Code: 97838-9544

Phone Number *(area code and number)*: 503-564-5200

B. Owner Type: F

C. Change of Owner Indicator: Yes ☐ No ☒

Date Changed Month / Day / Year:

IX. SIC Codes *(4 digit, in order of significance)*

Primary: 9711 (description) NATIONAL SECURITY (U.S. ARMY)

Secondary:

Secondary:

Secondary:

X. Other Environmental Permits *(see instructions)*

A. Permit Type (enter code)	B. Permit Number	C. Description
	25-0024	AIR CONTAINMENT DISCHARGE PERMIT
	SW320	SOLID WASTE DISPOSAL PERMIT
	HWL-10	SITE COLLECTION LICENSE STORAGE OF HAZARDOUS WASTE, PART B RCRA PERMITTED & INTERIM PERMIT STATUS BLDG. 203, K-BLOCK, J-BLOCK IGLOOS AND K-BLOCK ARE INTERIM STATUS PENDING COMPLETION OF THIS PERMITTING PROCESS.

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Form Approved. OMB No. 2050-0034 Expires 12-31-91
GSA No. 0246-EPA-GT

EPA I.D. Number (enter from page 1)											Secondary ID Number (enter from page 1)											
R	6	2	1	3	8	2	0	9	1	7												

XI. Nature of Business (provide a brief description)

The Umatilla Chemical Agent Disposal Facility has been designed to demilitarize, by incineration, munitions and bulk items that contain chemical agents (GB, VX, and Mustard).

XII. Process - Codes and Design Capacities

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Twelve lines are provided for entering codes. If more lines are needed, attach a separate sheet of paper with the additional information. If a process will be used that is not included in the list of codes below, then describe the process (including its design capacity) in the space provided in item XIII.

B. PROCESS DESIGN CAPACITY - For each code entered in column A, enter the capacity of the process.

1. AMOUNT - Enter the amount. In a case where design capacity is not applicable (such as in a closure/post-closure or enforcement action) enter the total amount of waste for that process unit.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

C. PROCESS TOTAL NUMBER OF UNITS - Enter the total number of units used with the corresponding process code.

PROCESS CODE	PROCESS	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
	DISPOSAL:	
D79	INJECTION WELL	GALLONS; LITERS; GALLONS PER DAY; OR LITERS PER DAY
D80	LANDFILL	ACRE-FEET OR HECTARE-METER
D81	LAND APPLICATION	ACRES OR HECTARES
D82	OCEAN DISPOSAL	GALLONS PER DAY OR LITERS PER DAY
D83	SURFACE IMPOUNDMENT	GALLONS OR LITERS
	STORAGE:	
S01	CONTAINER (barrel, drum, etc.)	GALLONS OR LITERS
S02	TANK	GALLONS OR LITERS
S03	WASTE PILE	CUBIC YARDS OR CUBIC METERS
S04	SURFACE IMPOUNDMENT	GALLONS OR LITERS
	TREATMENT:	
T01	TANK	GALLONS PER DAY OR LITERS PER DAY
T02	SURFACE IMPOUNDMENT	GALLONS PER DAY OR LITERS PER DAY
T03	INCINERATOR	SHORT TONS PER HOUR; METRIC TONS PER HOUR; GALLONS PER HOUR; LITERS PER HOUR; OR BTU'S PER HOUR
T04	OTHER TREATMENT (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundment or incinerators. Describe the processes in the space provided in item XIII.)	GALLONS PER DAY; LITERS PER DAY; POUNDS PER HOUR; SHORT TONS PER HOUR; KILOGRAMS PER HOUR; METRIC TONS PER DAY; METRIC TONS PER HOUR; OR SHORT TONS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
GALLONS PER HOUR	E
GALLONS PER DAY	U
LITERS	L
LITERS PER HOUR	H
LITERS PER DAY	V
SHORT TONS PER HOUR	D
METRIC TONS PER HOUR	W
SHORT TONS PER DAY	N
METRIC TONS PER DAY	S
POUNDS PER HOUR	J
KILOGRAMS PER HOUR	R
CUBIC YARDS	Y
CUBIC METERS	C
ACRES	B
ACRE-FEET	A
HECTARES	Q
HECTARE-METER	F
BTU's PER HOUR	K

EPA I.D. Number *(enter from page 1)*: OR6213820917

Secondary ID Number *(enter from page 1)*:

XII. Process - Codes and Design Capacities *(continued)*

EXAMPLE FOR COMPLETING ITEM XII (shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

Line Number	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	C. PROCESS TOTAL NUMBER OF UNITS	FOR OFFICIAL USE ONLY
X 1	S02	600	G	002	
X 2	T03	20	E	001	
1	S01	30,810	G	001	
2	S02	6,900	G	003	
3	S02	188,000	G	004	
4	S02	1,960	G	002	
5	T03	3.3	D	002	
6	T03	1.2	D	001	
7	T03	14.4	D	001	
8	T03	0.53	D	001	
9					
10		(See XIX)			
11					
12					

NOTE: If you need to list more than 12 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for additional treatment processes in Item XIII.

XIII. Additional Treatment Processes *(follow instructions from Item XII)*

Line Number (enter numbers in sequence with Item XII)	A. PROCESS CODE	B. TREATMENT PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. TREATMENT PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	C. PROCESS TOTAL NUMBER OF UNITS	D. DESCRIPTION OF PROCESS
9	T04	22,896	U	003	The Brine Reduction Area contains three rotary double-drum dryers.
10	T04	95,472	U	003	The Brine Reduction Area contains three evaporator packages.
	T04				
	T04				

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Form Approved. OMB No. 2050-0034 Expires 12-31-91
GSA No. 0246-EPA-OT

EPA I.D. Number (enter from page 1): R 6 2 1 3 8 2 0 9 1 7

Secondary ID Number (enter from page 1):

V. Description of Hazardous Wastes

A. EPA HAZARDOUS WASTE NUMBER - *Enter the four-digit number from 40 CFR, Part 261 Subpart D of each listed hazardous waste you will handle. For hazardous wastes which are not listed in 40 CFR, Part 261 Subpart D, enter the four-digit number(s) from 40 CFR, Part 261 Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.*

B. ESTIMATED ANNUAL QUANTITY - *For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.*

C. UNIT OF MEASURE - *For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:*

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in Item XII A. on page 3 to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed hazardous waste: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in Item XII A. on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that processes that characteristic or toxic contaminant.

NOTE: THREE SPACES ARE PROVIDED FOR ENTERING PROCESS CODES. IF MORE ARE NEEDED:

1. *Enter the first two as described above.*
2. *Enter "000" in the extreme right box of Item XIV-D(1).*
3. *Enter in the space provided on page 7, Item XIV-E, the line number and the additional code(s).*

2. PROCESS DESCRIPTION: *If a code is not listed for a process that will be used, describe the process in the space provided on the form (D.(2)).*

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER - Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. *Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.*
2. *In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.*
3. *Repeat step 2 for each EPA Hazardous Waste Number that can be used to describe the hazardous waste.*

EXAMPLE FOR COMPLETING ITEM XIV (shown in line numbers X-1, X-2, X-3, and X-4 below) - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

Line Number		A. EPA HAZARD WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESS (1) PROCESS CODES (enter)								D. PROCESS (2) PROCESS DESCRIPTION (If a code is not entered in D(1))
X	1	K	0	5	4	900	P	T	0	3	D	8	0			
X	2	D	0	0	2	400	P	T	0	3	D	8	0			
X	3	D	0	0	1	100	P	T	0	3	D	8	0			
X	4	D	0	0	2											Included With Above

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GSA No. 0246-EPA-OT

EPA I.D. Number (enter from page 1): 0 R 6 2 1 3 8 2 0 9 1 7

Secondary ID Number (enter from page 1):

XIV. Description of Hazardous Wastes (continued)

Line Number	A. EPA HAZARDOUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES (1) PROCESS CODES (enter)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in D(1))
1	P 9 9 9			S 0 1 S 0 2 T 0 3	SEE XIX FOR DISCUSSION
2	D 0 0 1			S 0 1 S 0 2 T 0 3	ON XIV B. AND C.
3	D 0 0 2			S 0 1 S 0 2 T 0 3	
4	D 0 0 3			S 0 1 S 0 2 T 0 3	
5	D 0 0 4			S 0 1 S 0 2 T 0 3	
6	D 0 0 5			S 0 1 S 0 2 T 0 3	
7	D 0 0 6			S 0 1 S 0 2 T 0 3	
8	D 0 0 7			S 0 1 S 0 2 T 0 3	
9	D 0 0 8			S 0 1 S 0 2 T 0 3	
10	D 0 0 9			S 0 1 S 0 2 T 0 3	
11	D 0 1 0			S 0 1 S 0 2 T 0 3	
12	D 0 1 1			S 0 1 S 0 2 T 0 3	
13	D 0 2 2			S 0 1 S 0 2 T 0 3	
14	D 0 2 8			S 0 1 S 0 2 T 0 3	
15	D 0 3 0			S 0 1 S 0 2 T 0 3	
16	D 0 4 3			S 0 1 S 0 2 T 0 3	
17					
18					
19					
20					
21					
22					
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35					

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Form Approved. OMB No. 2050-0034 Expires 12-31-91
GSA No. 0246-EPA-OT

EPA I.D. Number *(enter from page 1)*: 0 R 6 2 1 3 8 2 0 9 1 7

Secondary ID Number *(enter from page 1)*:

XIV. Description of Hazardous Waste *(continued)*

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 6.

Line Number	Additional Process Codes (enter)
1 - 16	T04

XV. Map

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in this map area. See instructions for precise requirements. (See XIX)

XVI. Facility Drawing

All existing facilities must include a scale drawing of the facility (see instructions for more detail). (See XIX)

XVII. Photographs

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail). (See XIX)

XVIII. Certification(s)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to be 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.

Owner Signature	Date Signed

Name and Official Title *(type or print)*
Moses Whitehurst, Jr., Lieutenant Colonel, U.S. Army, Commanding Officer

Operator Signature	Date Signed
See XIX	

Name and Official Title *(type or print)*
See XIX

X. Comments

11. The full name of the facility is Umatilla Chemical Agent Disposal Facility (UMCDF).

(Comments Continued)

CONTINUATION SHEET

VII. At this time, the Operator(s) of the UMCDF has not been determined by the U.S. Department of the Army. Once an Operator(s) has been selected for this facility, all information pertaining to the Operator(s) will be submitted as a permit notification to complete Section VII of this RCRA permit application and Section XVIII.

XII. Line 1 = Container Storage in the Container Handling Building
Line 2 = Spent Decontamination Solution Holding Tanks (3)
Line 3 = Brine Surge Tanks (4)
Line 4 = Agent holding tank (1); Agent surge tank (1)
Line 5 = Liquid Incinerators (2)
Line 6 = Deactivation Furnace System
Line 7 = Metal Parts Furnace
Line 8 = Dunnage Incinerator

XIV. B. and C. The U.S. Army has not declassified the exact quantities of munitions containing chemical agents that are stockpiled at this location. For national security purposes, the U.S. Army cannot supply the estimated annual quantity of these materials to be demilitarized at the UMCDF. Since all waste numbers listed in Section XIV are contained in the agent related wastes, exact quantities cannot be reported.

XV. See Figure B-2-1 in Section B of the permit application for the applicable map.

XVI. and XVII. Since this is a new facility, Sections XVI and XVII are not applicable. See Section B of the RCRA Part B permit application for appropriate facility drawings.

XVIII. At this time, the Operator(s) of the UMCDF has not been determined by the U.S. Department of the Army. Once an Operator(s) has been selected for this facility, all information pertaining to the Operator(s) will be submitted as a permit notification to complete Section VII of this RCRA permit application and Section XVIII.

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UMATILLA COUNTY PLANNING DEPARTMENT

Umatilla County Courthouse, 216 S.E. 4th ST., Pendleton, Oregon 97801
Phone: 278-7111, Ext. 252

July 30, 1986

Mr. Dan Saltzman
CH2M Hill
2020 SW Fourth Ave.
Portland, OR 97201

Dear Mr. Saltzman:

Umatilla County recognizes the Army's land use authority over the Umatilla Depot. The County Comprehensive Plan designates the Depot as "federal land" and thus not under the jurisdiction of the County. However, the plan does have a policy to promote coordination and cooperation between the County and federal agencies on land use matters. Your request for County comment is an example of the excellent relations between the County and the Army on land use issues.

Sincerely,

Dennis A. Olson
Planning Director

DAO:vt

[redacted]
...T OF ENVIRONMENTAL QUALITY
...W. FIFTH AVENUE
...BOX 1760
...LAND, OR 97207

FOR DEQ USE ONLY

LAND USE COMPATIBILITY STATEMENT
FOR ON-SITE SEWAGE DISPOSAL SYSTEMS

APPLICANT'S NAME	MAILING ADDRESS	PHONE
DEPARTMENT OF THE ARMY Program Manager for Chemical Demilitarization	Aberdeen Proving Ground Maryland 21010-5401 CITY STATE ZIP	(301)671-3337/3633

PROPERTY LOCATION

TOWNSHIP	RANGE	SECTION	TAX LOT OR ACCT NO
4N	27		100
SUBDIVISION/PROJECT	LOT	BLOCK	COUNTY
			Morrow

☐ PROPERTY IS A LOT OF RECORD CREATED BEFORE AUGUST 1, 1981.

PROPOSED LAND USE

Chemical Stockpile Disposal Facility - Air Contaminant Discharge Permit
& Hazardous Waste Treatment, Storage and Disposal Permit

STATEMENT OF COMPATIBILITY FROM APPROPRIATE LAND USE AUTHORITY
(An equivalent statement may be provided in lieu of this form)

PROPERTY'S ZONING DESIGNATION

EFU

THE ABOVE PROPOSAL HAS BEEN REVIEWED AND FOUND TO BE:

☒ COMPATIBLE WITH THE LCDC ACKNOWLEDGED COMPREHENSIVE PLAN
☐ NOT COMPATIBLE WITH THE LCDC ACKNOWLEDGED COMPREHENSIVE PLAN

OR

☐ CONSISTENT WITH THE STATEWIDE PLANNING GOALS
☐ NOT CONSISTENT WITH THE STATEWIDE PLANNING GOALS

REASON FOR FINDING OF COMPATIBILITY/INCOMPATIBILITY

Site Complies with Morrow County Comprehensive Plan

PROPERTY IS LOCATED (CHECK ONE)

☐ INSIDE CITY
☐ INSIDE URBAN GROWTH BOUNDARY OUTSIDE CITY LIMITS
☒ OUTSIDE URBAN GROWTH BOUNDARY

LAND USE AUTHORITY

Morrow County Planning Department

SIGNED	TITLE	DATE
[signature]	Director, Planning Department	9/27/90

CITY/COUNTY CONCURRENCE IF INSIDE URBAN GROWTH BOUNDARY

SIGNED TITLE

ATTACHMENT 2

WASTE ANALYSIS PLAN

The Umatilla Depot Activity (UMDA), in northeastern Oregon, is near Hermiston, Oregon, approximately 10 miles southwest of the city of Umatilla. The following treatment processes are based on the destruction of chemical agents and related munitions by incineration at the Umatilla Chemical Demilitarization Facility (UMCDF). The waste generated from Munition/Bulk Items Processing, Chemical Agent Processing, Dunnage Processing, Air Pollution Abatement System, and Chemical Agent Demilitarization Process will be characterized and analyzed to provide effective chemical agent management activities.

The following sections address the various components of the UMCDF Waste Analysis Plan. These components include analytical parameters and the rationale for their selection, test methods, sampling methods, frequency of analyses, additional requirements for wastes generated offsite, additional requirements for ignitable, reactive, or incompatible wastes, and laboratory quality assurance/quality control procedures. In effect, the Waste Analysis Plan delineates the waste parameters that will be determined prior to waste treatment or incineration at the UMCDF. The Waste Analysis Plan also characterizes wastes generated at the UMCDF, such as: treatment residues, brine salts, spent decontamination solutions, and incinerator pollution abatement system brines.

As previously discussed, the Army is using production knowledge, quality assurance and analytical data, and engineering judgment to characterize wastes to be treated at the UMCDF. The Army is both the chemical agent manufacturer and UMCDF designer and owner; therefore, the UMCDF was engineered to specifically achieve the complete thermal destruction of each of the chemical agents and will be operated with attention directed to minimizing the risk associated with all chemical agent management activities.

Parameters and Rationale

The analytical parameters and rationale for their selection are described by waste category in the paragraphs below. This information is summarized in Table C-2-1[1]. At a minimum, all wastes to be managed and treated from the incineration process, and the resultant residues will be managed as a hazardous waste.

Chemical Agents

Production knowledge, analytical data, and quality assurance data have been used along with engineering knowledge to characterize the chemical agents and to design the optimum treatment units and the UMCDF for their destruction. Although the chemical agents are well-defined solid wastes that are to be thermally destroyed under strict control, chemical agent in munitions will be obtained and tested for total percentage of chemical agent.

Explosives and Propellants

The fill specifications will be used to ascertain the amount of explosive and propellant being fed to the Deactivation Furnace System. Data available from manufacture and quality control for these materiels have been used with engineering knowledge to characterize them as hazardous wastes and to develop and assess effective treatment processes. Information gathered during pilot tests has demonstrated the ability of the proposed incinerators to adequately destroy these items.

Spent Decontamination Solution

The spent decontamination solution will be characterized and managed according to the hazardous waste numbers applicable to chemical agents (mustard, GB, and VX) and will be incinerated in one of the Liquid Incinerators.

[1]All tables are located at the end of this section.

Brines

The brines generated from the Liquid Incinerators, Metal Parts Furnace, and Deactivation Furnace System pollution abatement systems will be tested for specific gravity, the presence of chemical agents, selected organics associated with chemical agent decomposition (chloroform [D022], 1,2-dichloroethane [D028], 2,4-dinitrotoluene [D030], and vinyl chloride [D043]), pH, Toxicity Characteristic metals, Total Chlorine and BTU Value. These analyses are necessary for proper operation of the evaporator packages and the drum dryers in the Brine Reduction Area.

Liquid Incinerator Slag

The slag generated from the incineration of spent decontamination solution and chemical agent in the Liquid Incinerators will be tested for chemical agent, free liquids, and Toxicity Characteristic metals and organics. Chemical agent analysis will be conducted to verify chemical agent destruction. Analysis for Toxicity Characteristic metals and organics will determine offsite treatment and disposal methods.

Brine Salts

The brine salt generated from the operation of the drum dryers will be tested for Toxicity Characteristic metals and organics and for reactivity. The specific tests for reactivity will include testing for the presence of sulfides and inorganic fluorides. Brine salts will also be tested for the presence of free liquids to determine offsite treatment and disposal methods at an approved hazardous waste treatment, storage, or disposal facility.

Deactivation Furnace System Ash and Cyclone Residue

The ash and cyclone residue generated from the Deactivation Furnace System will be tested for Toxicity Characteristic metals and organics, the presence of chemical agents, PCBs, dioxins, furans, explosives and propellants, free liquids, and reactivity (sulfides and inorganic fluorides). The wastes being treated in the Deactivation Furnace System will generate Toxicity Characteristic ash and residue. Testing the wastes for chemical agents, explosives, propellants, dioxins, and furans will provide additional information on the destruction efficiency of the incinerators and information that will be necessary for further management of the waste. The analysis for reactivity will establish the container management practices.

Metal Parts Furnace Ash

Ash generated in the operation of the Metal Parts Furnace will be tested for the same parameters as the Deactivation Furnace ash; testing for the presence of explosives and propellants will not be done since these wastes do not enter this incinerator.

Dunnage Incinerator Ash and Baghouse Residue

The ash and pollution abatement system baghouse residue generated from the Dunnage Incinerator will be tested for Toxicity Characteristic metals and organics, presence of chemical agents, dioxins, furans and free liquids. If the material is found to contain chemical agents, it will be incinerated in the Dunnage Incinerator. The analysis for free liquids and Toxicity Characteristic metals and organics will establish how the wastes can be managed.

Ventilation System Filters

The spent high efficiency particulate air filters and prefilters will be tested. Analyses will provide useful information to the management of these items, as these items will contain low levels of contaminants (chemical agents) and the treatment units are designed to attain a minimum of 99.9999 percent destruction removal efficiency of pure chemical agent. The air and prefilters will be tested to verify the feed limit demonstrated in the trial burns.

Spent Carbon

The spent carbon generated from the filters for the incinerators pollution abatement systems, Deactivation Furnace System cyclone, ventilation system, and Agent Collection Tank System will be tested because it will be managed and treated in the Dunnage Incinerator as hazardous waste. The spent carbon will be tested for chemical agent, TC Metals, dioxins and furans, TC Organics and to verify the feed limit demonstrated in the trial burn.

Laboratory Waste

Laboratory wastes generated at the UMCDF may include chemical agent samples, various spent reagents and solvents, and solid wastes. These wastes may contain Toxicity Characteristic metals and organics that are associated with the chemical agents and wastes related to the chemical agents. Laboratory wastes will be analyzed for ignitability, corrosivity, Toxicity Characteristic metals and organics, and chemical agent. Generator knowledge and sampling will be applied to characterize the laboratory waste. If liquid laboratory wastes are suspected of being contaminated with chemical agent, they will be decontaminated before release into the LAB chemical waste storage tank and incineration in the Liquid Incinerators. Chemical agent-contaminated solid wastes will be bagged and incinerated in the Dunnage Incinerator. Laboratory wastes not contaminated with chemical agent will be packaged, stored onsite, and shipped offsite to an approved hazardous waste treatment, storage, or disposal facility in accordance with all generator and LDR requirements.

Metal Munitions Casings and Parts

Metal munitions and parts will contain residual quantities of chemical agent, and will be decontaminated to the 5X level in the Metal Parts Furnace. Although the Metal Parts Furnace has been designed specifically to destroy chemical agents, analysis will be required to verify the metal munitions casings and parts have met the treatment standard 5X.

After incineration, metal scrap will be tested, sampled and analyzed to verify indeed 5X treatment standard has been achieved, then recycled at an approved recycling facility, as noted below, and will be exempt from further regulation under RCRA as a hazardous waste. Incinerator ash (other than recyclable metals) will be containerized and sent offsite to an approved hazardous waste treatment, storage, or disposal facility.

Metal Scrap

Metal scrap that has been incinerated for **at least** 15 minutes at a minimum temperature of 1,000°F in the Metal Parts Furnace, Deactivation Furnace System, or Dunnage Incinerator will be considered to meet Army Level 5X decontamination requirements and deemed nonhazardous. Although published data and studies conducted to date indicate that Level 5X decontamination will destroy residual chemical agent contamination; confirmatory sampling and analysis of the treated scrap metal will be necessary to guarantee protection of human health and environment.

After incineration in one of the three incinerators, noted above, the metal scrap will be tested and verified to meet the treatment standard 5X through sampling and analysis and then recycled at an approved recycling facility and will be exempt from further regulation under RCRA as a hazardous waste.

Miscellaneous Solid Wastes

Analysis will not be conducted on the miscellaneous solid wastes, also known as dunnage. Dunnage wastes and strainers will be managed in accordance with the treatment standards applicable to the hazardous waste numbers assigned to the chemical agents.

Container Handling Building Sump Liquids/Materials(i.e. Sludges, & slurries etc.)

Container Handling Building sump liquids/materials (i.e. Sludges, slurries, etc.) will include washdown liquid from routine maintenance duties. Sump liquids will be sampled and analyzed for the presence of chemical agent and Toxicity Characteristic metals (D004 through D011) and organics (D022, D028, D030, and D043) and corrosivity. If the material is determined to be hazardous, the liquid will be pumped out of the sump, containerized, and then transported to the Munitions Demilitarization Building for incineration in the Liquid Incinerators. If the sump liquids are found to be nonhazardous, they will be appropriately discharged.

[?]Process / wastewater

The process water and wastewater streams will be sampled and analyzed for chemical agent, Toxicity Characteristic metals and organics so that these streams are properly managed in accordance with all applicable hazardous waste regulations. Knowledge of process will ensure proper characterization of these streams. The streams should be sampled for each chemical agent munition campaign change.

Test Methods

The analytical methods and their references are listed in Table C-2-2 for each test parameter above. The munitions will be tracked using the inventory form presented in Figure C-1-1.

Sampling Methods

Table C-2-3 lists the specific equipment and methods (where appropriate) that will be used to obtain a representative sample of each waste type. One representative sample, plus appropriate quality assurance/quality control (QA/QC) samples, will be collected for each sampling event.

The Toxicity Characteristic Leaching Procedure may place additional requirements on the size of waste samples. When required, aliquots will be obtained for preliminary evaluation for nonvolatile analyte extraction, for volatile extractions, and for quality control.

A QA/QC program has been established to ensure the accuracy of sampling and analytical results. This program is detailed in Attachment C-5 of the March 1995 Part B Application which is hereby attached and made enforceable. Details of this program are summarized below for each of the waste streams to be analyzed.

Brines

The brines in the brine surge tank will be analyzed for specific gravity, chemical agent, Toxicity Characteristic metals and organics, pH, Total Chlorine, and BTU Value. If chemical agent is detected in the brine, two more brine samples will be taken and analyzed for the chemical agent. If it is confirmed that chemical agent is present in the brine, caustic will be added to the brine surge tanks. Samples of the brine will then be collected and taken to the laboratory for chemical agent analysis. If chemical agent is not detected in the brine, the brine or will be treated in the evaporator packages and drum dryers in the Brine Reduction Area.

Liquid Incinerator Slag

The Liquid Incinerator slag will be sampled and analyzed for chemical agent, free liquids, and Toxicity Characteristic metals and organics. The slag will be sampled using a rotating coring device or hammer and chisel, which should allow for any variation in the waste composition.

Brine Salts

The brine salts are homogeneous in nature; therefore no special sampling technique will be necessary. Brine salts will be sampled using a thief, which should allow for any variation in the waste composition. The brine salts will be analyzed for Toxicity Characteristic metals and organics, reactivity, and free liquids.

Container Handling Building Sump Liquids/Materials

Container Handling Building sump liquids/materials will be analyzed for chemical agent, Toxicity Characteristic metals and organics and corrosivity. Representative grab samples will be taken to ensure proper characterization.

Incinerator Ash and Baghouse/Cyclone Residues

The sampling approach described previously for the brine salts will also be followed for the Deactivation Furnace System, Dunnage Incinerator, and Metal Parts Furnace ash; Deactivation Furnace System cyclone residue; and Dunnage Incinerator baghouse residue. The only difference will be that if chemical agent is detected in any of the waste types, all subsequent containers will be analyzed for chemical agent. Any ash or residue contaminated with chemical agent will be processed.

Laboratory Waste

The laboratory waste will be sampled and analyzed for ignitability, corrosivity, chemical agent, and Toxicity Characteristic metals and organics. No special sampling technique is needed due to the homogeneous nature of the waste. A thief will be used, which should allow for any variation in the waste composition.

Frequency of Analysis

Table C-2-4 shows the frequency of analyses for each waste type and parameter for which sampling and analysis have been specified. Wastes to be analyzed will be sampled more frequently in the start-up operations during each campaign change and trial burn operations of the UMCDF to QA/QC the wastes generated onsite. The frequency of analysis will be effectively managed to ensure compliance with all hazardous waste requlations by utilizing a tier system, in which the facility will sample less frequently as the waste streams become fully characterized over the life span of the facility.

Additional Requirements for Wastes Generated Offsite

All munitions and bulk items, that are handled at the UMCDF will originate onsite (UMDA). There will be no wastes received from offsite locations, and as such, no additional requirements are necessary.

Tracking of Hazardous Wastes

As previously discussed, the munitions and bulk items were produced for the exclusive use of the military, and therefore, were manufactured to government standards according to very strict quality control procedures. The specifications prescribed the amount of chemical agent fill, the weight of explosive in the burster, and where applicable, the weight of the propellant.

The UMCDF will use rigorous procedures for labeling, tracking, and keeping records on the munitions and bulk items prior to processing. Initially, a detailed account of every munition, bulk item, and onsite transport container brought to the UMCDF will be prepared. A sample tracking form is shown in Figure C-1-1. In addition, at the UMDA's Chemical Limited Area, munitions and bulk items are separated by item lots. Next to each lot is a metal box containing a magazine data card stating the production number and the quantity in each lot. The lot number is stenciled on each chemical munition and bulk item. By using the production lot number, the Army can specifically identify the type of munition, caliber (e.g., 155-mm or 8-inch), type of chemical agent, and date and place of manufacture. Furthermore, the type of chemical agent is also stenciled on each munition and bulk item and its onsite transport container.

An automated inventory system consisting of automated graphic displays will be used as a means of monitoring chemical agent amounts by location in the UMCDF, and to verify manual records and logs.

Additional Requirements for Ignitable, Reactive, or Incompatible Wastes

The mission of the UMCDF is to treat and/or destroy munitions and bulk items. Every aspect of the UMCDF design and operation will acknowledge the hazards inherent in managing this waste type. UMCDF compliance with the regulatory requirements for handling ignitable, reactive, and incompatible wastes is addressed in Section F-5a.

Although ignitable, reactive, or otherwise incompatible chemicals may be present and used in the laboratory, they will not be contained, stored, or managed in a manner that could promote chemical reaction, fire, or explosion. Wastes that are not contaminated with chemical agent will be segregated, containerized, and stored onsite prior to shipment offsite to an approved hazardous waste treatment, storage, or disposal facility. Previous sections of this Waste Analysis Plan have indicated the ignitable and reactive characteristics of wastes to be managed at the UMCDF.

Laboratory Quality Assurance/Quality Control Procedures

Detailed procedures that will be used in the laboratory as appropriate for specific chemical agent analysis for which no EPA-approved methods currently exist are included in Attachment D-2 of the March 1995 Part B Application which is hereby attached to the permit. General quality control/quality assurance procedures are in accordance with the specified analytical methods for individual parameters (see Table C-2-2), as described in the EPA publication SW-846, "Test Methods for Evaluating Solid Wastes," and in accordance with "Laboratory Quality Assurance Program Plan For The Chemical Stockpile Disposal Programs," which includes an overall quality assurance/quality control plan for demilitarization of the chemical agent stockpile.

The Quality Assurance Project Plan for the trial burns is presented in Attachment D-5 and Sections D-5, D-6, D-7, and D-8 of this permit application.

QA/QC procedures for other waste sampling and analysis are detailed in the QA/QC Plan for waste sampling and analysis, which is included in Attachment C-5.

Table C-2-1
RATIONALE FOR SELECTION OF ANALYSIS TO PERFORM ON WASTE MATERIALS

Waste	Analysis	Rationale
Chemical Agents (mustard, GB, and VX) in Munitions and Bulk Items		Sampling and analysis will be conducted because chemical agents have aged, are aging, and must be characterized to insure feed limits match the feed limits verified as protective during the trial burns. During each campaign, a monthly sample of chemical shall be obtained and tested for total percentage of chemical agent.
Explosives/ Propellants in Munitions		Sampling and analysis will be conducted because the explosives and propellants have a long, but not perpetual shelf life and are undergoing slow chemical reactions that lead to the formation of daughter products. These wastes will be managed and stored as RCRA hazardous wastes. During each campaign, a monthly sample of explosives and propellants shall be obtained and tested for total percentage of Method 8230 constituents and for total metals.
Process/Wastewater	• TC Metals (D004 - D011) • TC Organics • Chemical Agent	Sampling and analysis will be conducted to ensure process/wastewater will be fully characterized and properly managed in accordance with all applicable hazardous waste regulations.

Table C-2-1 (continued)
RATIONALE FOR SELECTION OF ANALYSIS TO PERFORM ON WASTE MATERIALS

Waste	Analysis	Rationale
Spent Decontamination Solution and Solids		Spent decontamination solution will be managed and incinerated as hazardous wastes in accordance with BDAT standards applicable to the chemical agent and chemical agent-related wastes. Frequent analysis is not necessary because chemical agent levels in decontamination wastes are expected to be insignificant and will not affect management or treatment. Therefore, a quarterly sample will be obtained and described by color, turbidity, and tested for the presence of chemical agents and total chlorine.
Brine Salt	• TC Metals (D004 - D011) • Reactivity • Free liquids • TC Organics (D022, D028, D030, D043)	Metals are expected to be present in the brine salt and will be assessed for offsite management purposes and trend analysis for evaluating treatment system deterioration. Reactivity will be assessed for offsite management purposes and container compatibility. The absence of free liquids will be verified.
Ventilation System Filters (HEPA and Prefilters)	• Chemical Agent	Spent filters will be sampled and analyzed. Frequency of sampling and test methodology shall be in accordance with DEQ-approved methods. [Note to permit writer: Approvable test method to be made into a compliance item]
Spent Carbon (from DFS, MPF, DUN, and LIC PASs; Ventilation System; DFS Cyclone; and Agent Collection Tank System Filters)	• Chemical Agent • TC Metals • Dioxins & Furans • TC Organics	Spent carbon will be sampled and analyzed to determine if the additional loads will impact or overwhelm the incinerators; reducing their efficiency and performance.

Table C-2-1 (continued)
RATIONALE FOR SELECTION OF ANALYSIS TO PERFORM ON WASTE MATERIALS

Waste	Analysis	Rationale
Ash (DFS and MPF) and DFS Cyclone Residue	• TC Metals (D004-D011) • Chemical Agent • Free Liquids • Explosives and Propellants (DFS only) • Reactivity • TC Organics (D002, D028, D030, D043) • PCBs • Dioxins and Furans Analysis (DFS ash and cyclone residue only)	The listed analyses are necessary to establish presence of these constituents. Presence of chemical agent will require further processing/treatment. This waste will be tested for reactivity for container management purposes. The DFS ash and cyclone residue will be analyzed for dioxins and furans to determine further waste management needs. The analysis should be at least when residue is removed from the cyclone and the waste bin is full.
Ash and Baghouse Residue (DUN)	• TC Metals (D004-D011) • Chemical Agent • TC Organics (D022, D028, D043) • Free Liquids • Dioxins & Furans	The presence of chemical agent will require further processing/treatment. The presence of metals and organics could make the material a hazardous waste requiring additional offsite treatment. Verify the absence of free liquids.
Brine	• Chemical Agent • pH • TC Metals (D004-D011) • TC Organics (D022, D028,D030,D043) • Specific Gravity • Total Chlorine • BTU Value	Verify absence of chemical agent. Determine if heavy metals are present (have been previously identified) and if TC organic analytes associated with chemical agent decomposition are present. (Note: In lieu of analysis, these wastes may be managed and treated as hazardous wastes for all potentially applicable waste numbers.) Determine brine treatment needs.
LIC Slag	• Chemical Agent • TC Metals (D004-D011) • TC Organics (D022, D028, D043) • Free Liquids	The listed analyses are necessary to establish the presence/absence of these constituents. Chemical agent analysis conducted to verify chemical agent destruction.

Table C-2-1 (continued)
RATIONALE FOR SELECTION OF ANALYSIS TO PERFORM ON WASTE MATERIALS

Waste	Analysis	Rationale
Laboratory Wastes (liquid)	• Chemical Agent • TC Metals (D004 - D011) • TC Organics (D022, D028, D043) • Ignitability • Corrosivity	All laboratory wastes will be managed and incinerated in compliance with the treatment standards associated with the waste numbers assigned to chemical agent (D003-D011, D022, D028, and D043) and characteristic hazards of ignitability (D001) and corrosivity (D002) when applicable. Chemical agent present in samples may exhibit one or more of the above hazards, and will be incinerated accordingly. Liquid laboratory wastewaters will be stored in the LAB chemical waste storage tank prior to incineration in one of the LICs.
Laboratory Wastes (solid)	• Chemical Agent • TC Metals (D004-D011) • TC Organics (D022, D028, D043) • Ignitability • Corrosivity	If chemical agent contaminated, solid wastes will be bagged and incinerated.[a] Otherwise, the wastes will be characterized for offsite treatment, storage, or disposal based on the material/process generating the waste.
Metal Casings and Metal Parts	• Chemical Agent	The metal scrap will not be recycled and shipped offsite to an approved recycling facility until after the 5X decontamination requirements have been verified by both meeting the treatment standard (5X) and by verification sampling and analysis. The metal casings and parts will then be exempt from 40 CFR 261.6(a)(3)(B)(iv) as a hazardous waste.

Table C-2-1 (continued)
RATIONALE FOR SELECTION OF ANALYSIS TO PERFORM ON WASTE MATERIALS

Waste	Analysis	Rationale
Metal Scrap (DFS, MPF, and DUN)	• Chemical Agent	The metal scrap will not be recycled and shipped offsite to an approved recycling facility until after the 5X decontamination requirements have been verified by both meeting the treatment standard (5X) and by verification sampling and analysis. The metal scrap will then be exempt from 40 CFR 261.6(a) (3)(B)(iv) as a hazardous waste.
Miscellaneous Solid Wastes (Dunnage and strainers)	• Chemical Agent • TC Organics • TC Metals	Dunnage wastes will be managed in accordance with BDAT standards applicable to chemical agents. Analysis is not necessary since chemical agent levels in dunnage wastes are expected to be insignificant and will not affect management or treatment. However, strainers will be sampled to quantify and characterize the hazardous waste entrained in the process streams that utilize them. This will be done previous to the beginning of each chemical agent/munition campaign. It will ensure a more accurate accountability of solid wastes and the type of free liquids in those streams.
CHB Sump Liquids/ Materials (i.e. Sludges ,etc.)	• Chemical Agent • TC Metals (D004 - D011) • TC Organics (D022, D028, D043) • Corrosivity	CHB sump liquids/materials (i.e. sludges, etc.) will be sampled and analyzed for the presence of chemical agent and hazardous contaminants. If CHB liquids are determined to be nonhazardous, they will be appropriately discharged. However, if they are found to be hazardous, they will be pumped, containerized, and transported to the MDB for incineration in one of the LICs.

NOTES:

[a] As previously discussed, laboratory wastes that are not contaminated with chemical agent will not be incinerated onsite, but will be disposed offsite in accordance with generator and LDR requirements.

BDAT	=	best demonstrated available technology
CHB	=	Container Handling Building
DFS	=	Deactivation Furnace System
DUN	=	Dunnage Incinerator
HEPA	=	high efficiency particulate air
LDR	=	land disposal restriction
LIC	=	Liquid Incinerator
MDB	=	Munitions Demilitarization Building
MPF	=	Metal Parts Furnace
PAS	=	pollution abatement system
TC	=	Toxicity Characteristic

Table C-2-2

TEST METHODS

Parameter	Test Method	Reference[a]
GB and VX	Chloroform extraction followed by GC analysis	APCA-SR-S SOP No. ELS-2,3[a]
Mustard Agent	Hexane extraction followed by GC analysis	APCA-SR-S SOP No. ELS-4[a]
TCLP	Acid extraction of nonliquids Liquids--no extraction necessary	Method 1311
Arsenic	Atomic absorption--gaseous hydride	Method 7061, EPA 206.3
Selenium	Atomic absorption--gaseous hydride	Method 7741, EPA 270.3
Mercury	Automated cold vapor technique	Method 7471
Barium	Atomic absorption--direct aspiration	Method 7080, EPA 208.1
Cadmium	Atomic absorption--direct aspiration	Method 7130, EPA 213.1
Chromium	Atomic absorption--direct aspiration	Method 7190, EPA 218.1
Silver	Atomic absorption--direct aspiration	Method 7760, EPA 272.1
Lead	Atomic absorption--direct aspiration	Method 7420, EPA 239.1

Table C-2-2 (continued)

TEST METHODS

Parameter	Test Method	Reference[a]
Total Metals	Inductively-coupled plasma atomic emissions spectrometry (except mercury) and automated cold vapor technique (mercury)	Method 6010 and Method 747
Chloroform	Gas chromatograph	Method 8010
1,2-Dichloro-ethane	Gas chromatograph	Method 8010
2,4-Dinitro-toluene	Gas chromatograph, Mass spectrometry	Method 8250
Vinyl Chloride	Gas chromatograph	Method 8010
Tetryl	Acetonitrile extraction followed by HPLC analysis	CAMDS SOP No. LAB 32-00-02-02[a]
TNT	Acetonitrile extraction followed by HPLC analysis	Method 8330
Nitroglycerine	Acetonitrile extraction followed by HPLC analysis	CAMDS SOP No. LAB 32-00-02-02[a]
RDX	Acetonitrile extraction followed by HPLC analysis	CAMDS SOP No. LAB 32-00-02-02[a]

Table C-2-2 (continued)

TEST METHODS

Parameter	Test Method	Reference[a]
Nitrocellulose	Water wash, followed by acetone extraction, followed by reaction with caustic, followed by EPA method 354.1 spectrophotometric analysis	EPA 354.1
pH	Electrometric	Method 9040
Cyanides	Colormetric, pyride-barbituric acid	Method 9010
Inorganic Fluorides	Potentiometric	EPA 340.2
Sulfides	Colormetric, Methylene Blue	Method 9030
Free Liquids	Paint Filter Liquids Test Free Liquids Test	Method 9095 Method 9096
Dioxins and Furans	Inductively-coupled plasma atomic emissions spectrometry (except mercury) and automated cold vapor technique (mercury)	Method 8280
Specific Gravity	Digital density meter, Hydrometer, Pycnometer	ASTM D4052 ASTM D287 ASTM D369

NOTES:

[a] Where an EPA-approved method for analysis exists (SW-846 or equivalent), it shall be used. Methods developed by the Army will be used for those compounds that do not have EPA methods. These Army methods are provided in Attachment D-2.

ASTM = American Society for Testing and Materials
CAMDS = Chemical Agent Munitions Disposal System
GC = Gas Chromatograph
HPLC = High Performance Liquid Chromatography
SOP = Standing Operating Procedures
TCLP = Toxicity Characteristic Leaching Procedure

Table C-2-3

SAMPLING METHODS

Waste	Analysis	Sampling Equipment and Method[a]
Brine	• Chemical Agent • TC Metals • pH • TC Organics • Specific Gravity • Total Chlorine • BTU Value	Sample will be obtained from the discharge side of the brine circulating pump. Waste is homogeneous, so no other special sampling techniques are necessary.
Brine Salt	• TC Metals • Reactivity • Free Liquids • TC Organics	Thief: No special sampling techniques are necessary since waste is homogeneous. The use of the thief should allow for any variation in waste composition.
Ash (DFS and MPF)	• TC Organics • TC Metals • Chemical Agent • Free Liquids • Explosives and Propellants • Reactivity • Dioxins and furans (DFS only) • PCBs	Thief or Auger: ASTM Standard D420-69 or ASTM Standard D346-75.

Table C-2-3 (continued)

SAMPLING METHODS

Waste	Analysis	Sampling Equipment and Method[a]
Cyclone Residue (DFS)	• Chemical Agent • Explosives and Propellants (DFS only) • Reactivity • Free Liquids • TC Organics • TC Metals • Dioxins and Furans • PCBs	Thief: No special sampling techniques are necessary since waste is homogeneous. The use of the thief should allow for any variation in waste composition.
Ash and Baghouse Residue (DUN)	• TC Organics • TC Metals • Chemical Agent • Free Liquids • Dioxins & Furans	Thief or Auger: ASTM Standard 32-42, Sampling ferro alloys.
LIC Slag	• Chemical Agent • TC Metals • TC Organics • Free Liquids	Rotating coring device or hammer and chisel: No special sampling techniques are necessary since waste will be homogeneous. The use of a rotating coring device or hammer and chisel should allow for any variation in waste composition.

Table C-2-3 (continued)

SAMPLING METHODS

Waste	Analysis	Sampling Equipment and Method[a]
Laboratory Wastes (liquid)	• Chemical Agent • TC Metals • TC Organics • Ignitability • Corrosivity • Process Knowledge	Thief or COLIWASA: No special sampling necessary since laboratory waste will be homogeneous. The use of the thief/COLIWASA should allow for any variation in waste composition.
Laboratory Wastes (solid)	• Chemical Agent • TC Metals • TC Organics • Ignitability • Corrosivity • Process Knowledge	Thief, grab, or process knowledge.
CHB Sump Liquids/Materials	• Chemical Agent • TC Metals • TC Organics	Grab
Chemical Agents in Munitions and Bulk Items	• In-line Grab Sample	
Explosives/ Propellants in Munitions	• In-line Grab Sample	

Table C-2-3 (continued)

SAMPLING METHODS

Waste	Analysis	Sampling Equipment and Method[a]
Spent Decontamination Solution	• Grab Sample	
Ventilation System Filters (HEPA filters and prefilters)	• Grab Sample	
Miscellaneous Solid Wastes (Dunnage & strainers)	• Process Knowledge (dunnage) • Grab Sample (strainers)	None
Spent Carbon	• Grab Sample	
Metal Casings and Metal Parts	• Lot Sampling (for chemical agent 5X verification)	
Metal Scrap (DFS, MPF, and DUN)	• Lot Sampling (for chemical agent 5X verification)	

NOTES:

[a] Sample containers and preservation techniques, if any, will be in accordance with individual method of analysis (see Table C-2-2). See also QA/QC Plan in Attachment C-5.

CHB = Container Handling Building

DUN = Dunnage Incinerator

DFS = Deactivation Furnace System

HEPA = high efficiency particulate air

LIC = Liquid Incinerator

MPF = Metal Parts Furnace

TC = Toxicity Characteristic

Table C-2-4

SAMPLING FREQUENCY

Waste	Analysis	Frequency
Brine	• Chemical Agent	Each batch
	• TC Metals	Each batch
	• TC Organics	Each chemical agent/munition change
	• pH	Each batch
	• Specific Gravity	Each batch
Brine Salt	• TC Organics	Each chemical agent/munition change
	• TC Metals	Each container
	• Reactivity	Each container
	• Free Liquids	Each container
Ash (DFS, MPF)	• TC Organics	Each chemical agent/munition change
	• TC Metals	Each batch
	• Chemical Agent	Each batch
	• Free Liquids	Each batch
	• Explosives and Propellants (DFS only)	Each chemical agent/munition change
	• Reactivity	Each chemical agent/munition change
	• Dioxins and furans (DFS only)	1 sample/container generated

Table C-2-4 (continued)

SAMPLING FREQUENCY

Waste	Analysis	Frequency
Cyclone Residue (DFS)	• Chemical Agent	1 sample/drum generated
	• Explosives and Propellants	1 sample/drum generated
	• Reactivity	
	• Free Liquids	1 sample/drum generated
	• TC Organics	1 sample/drum generated
	• TC Metals	1 sample/drum generated
	• Dioxins and Furans	1 sample/drum generated 1 sample/drum generated
Ash and Baghouse Residue (DUN)	• TC Organics	Each chemical agent/munition change
	• TC Metals	Each batch
	• Chemical Agent	Each batch
	• Free Liquids	Each batch
LIC Slag	• Chemical Agent	Each chemical agent/munition change
	• TC Metals	Each container generated
	• TC Organics	Each chemical agent/munition change
	• Free Liquids	Each chemical agent/munition change
Laboratory Wastes (liquid)	• Chemical Agent	As generated or at a minimum of once per year
	• TC Metals	As generated or at a minimum of once per year
	• TC Organics	As generated or at a minimum of once per year
	• Ignitability	Each chemical agent/munition change
	• Corrosivity	Each chemical agent/munition change

Table C-2-4 (continued)

SAMPLING FREQUENCY

Waste	Analysis	Frequency
Laboratory Wastes (solid)	• Chemical Agent	As generated or at a minimum of once per year
	• TC Metals	As generated or at a minimum of once per year
	• TC Organics	As generated or at a minimum of once per year
	• Ignitability	Each chemical agent/munition change
	• Corrosivity	Each chemical agent/munition change
CHB Sump Liquids/ Materials (i.e.sludges,slurries etc.)	• Chemical Agent	As generated
	• TC Metals	As generated
	• TC Organics	As generated
Chemical Agents (GB, VX, and mustard) in Munitions and Bulk Items	• Chemical Agent • Total Metals	Monthly, during campaigns
Explosive/ Propellants in Munitions	• Explosives and Propellants • Chemical Agent • Total Metals	Monthly, during campaigns
Spent Decontamination Solution	• Chemical Agent • Total Metals • Total Organic Carbon	Quarterly

Table C-2-4 (continued)

SAMPLING FREQUENCY

Waste	Analysis	Frequency
Ventilation System Filters (HEPA filters and prefilters)	• *To be determined as compliance item*	
Miscellaneous Solid Wastes (dunnage & strainers)	• None	N/A
	• Chemical Agent	Each chemical agent/munition change
	• Total Organics	Each chemical agent/munition change
Spent Carbon	• Total Metals	Each chemical agent/munition change
	• Total Organics	Each chemical agent/munition change
	• Chemical Agent	Each chemical agent/munition change
Metal Casings and Metal Parts	• Total Metals	Each chemical agent/munition change
	• Total Organics	Each chemical agent/munition change
	• Chemical Agent	Each chemical agent/munition change
Metal Scrap (DFS, MPF, DUN)	• Chemical Agent	Each chemical agent/munition change
Process/wastewater	• Chemical Agent	Monthly, during campaigns
	• TC Metals	Monthly, during campaigns
	• TC Organics	Monthly, during campaigns

NOTES:

CHB = Container Handling Building
DFS = Deactivation Furnace System
DUN = Dunnage Incinerator
HEPA = high efficiency particulate air
LIC = Liquid Incinerator
MPF = Metal Parts Furnace
N/A = not applicable
TC = Toxicity Characteristic

ATTACHMENT 3

INSPECTION SCHEDULE

General Inspection Requirements

The UMCDF will be inspected according to a prescribed inspection schedule designed to detect equipment deterioration and prevent possible equipment malfunctions that will cause a release of hazardous wastes to the environment or pose a threat to human health. The inspection schedule document and inspection logbook will be located at the UMCDF. At a minimum, the inspection program will include inspections of the equipment items listed in Table F-2-1.[1] The inspection frequencies are also shown in Table F-2-1.

Inspection logs and documents will be available at the Process Support Building of the UMCDF.

Types of Problems

The types of problems to look for during inspections are identified in Table F-2-1 in the "Types of Problems" column.

Frequency of Inspections

The frequency of inspection is given in Table F-2-1 in the "Frequency" column. The frequency of inspection is based on the rate of possible deterioration of equipment and the probability of an environmental or human health incident if the deterioration, malfunction, or operator error goes undetected between inspections. The inspections will be performed often enough to allow identification of problems in time to correct them before they harm human health or the environment.

Where appropriate, inspection frequencies have been developed from operational knowledge gained at the Chemical Agent Munitions Disposal System currently in operation at the Tooele Army Depot, Tooele, Utah. Manufacturer recommendations, Army Standing Operating Procedures, Occupational Safety and Health Administration regulations, and specific regulated unit requirements will be adhered to by the UMCDF.

[1]All tables are located at the end of this section.

Safety and Emergency Equipment

Safety and emergency equipment will be inspected as indicated in Table F-2-1. The results of each inspection will be recorded on the log sheets in Attachment F-2. The weekly inspection of safety and emergency equipment will be an in-depth inspection designed to detect depleted stock or items with excessive wear.

The following procedures will be used to determine that outer gloves and boots used in Demilitarization Protective Ensembles are decontaminated in the airlocks after use in the process areas:

- The items will be decontaminated by thoroughly washing them, first with decontamination solution for the particular chemical agent and then with clear water.

- The boots and gloves (and Demilitarization Protective Ensembles) will be tested to assure that local chemical agent concentrations in the air immediately above the surface of the boots and gloves are less than 0.2 milligram per cubic meter of nerve agent GB and mustard agent HD, or 0.4 milligram per cubic meter of nerve agent VX.

- The gloves and boots will be removed from the person and placed immediately in a plastic bag. The bag will be sealed.

- After the gloves and boots are confirmed to be decontaminated by the above procedure, they will be sent to the laundry to be washed and reissued.

Specific Process Inspection Requirements

Container Inspection

The containers stored in the Container Handling Building (used to store munitions or bulk items awaiting demilitarization) will be inspected weekly for leaking munitions, bulk items, or overpacks; rust; corrosion; other deterioration; structural defects; or trends that could indicate failure, such as containers out of proper position or alignment, dents, unusual appearance, or signs of tampering.

Also inspected will be the Container Handling Building's secondary containment system, including the curbing, trenches, drains, flooring, sump, sump pumps, and the munition materiel handling system.

All containers stored in the Container Handling Building for a week or greater will be monitored through the chemical agent monitor port using the equipment and procedures designated in Attachments D-2 and F-1 to determine whether the munitions, bulk items, or overpacks inside the containers are leaking.

If any of the containers are found to contain leaking munitions, bulk items, or overpacks, they will be prioritized over other munitions/bulk items in the Container Handling Building for processing and chemical agent monitoring of the Container Handling Building will be performed continuously. All onsite transport containers/overpack containers (for spray tanks) will be coded for tracking purposes and visually assessed once a year for structural integrity and vapor tightness. The results of this assessment will be presented in a written report and maintained at the UMCDF in the operating record. Any onsite transport containers or overpack containers (for spray tanks) that do not pass this assessment will be taken out of service immediately and not returned to service unless they are repaired and pass a reassessment. Documentation of the reassessment will be performed as described above.

In addition, the containment system will be inspected as discussed in Table F-2-1.

Tank System Inspection

The permitted hazardous waste tank systems (Agent Collection Tank System, Brine Surge Tank System, and Spent Decontamination Holding Tank System) will be inspected in a similar manner as described in this section.

Each tank system will be thoroughly inspected on at least a daily basis. The inspection will address overfill and spill control equipment, aboveground portions of the tank system, data gathered from monitoring and leak detection equipment, construction materials, and the area immediately surrounding the externally accessible portion of the tank system as well as the secondary containment system.

For all tank system inspection activities, the inspections and frequencies are given in Table F-2-1, and the inspection log sheets are shown in Attachment F-2. Specific items of the tank system inspections are addressed in the following paragraphs.

Since none of the tanks to be permitted will be underground tanks or underground portions of the aboveground tanks, the regulatory requirements for inspection of the cathodic protection system are not applicable.

The Army hereby requests a variance from any requirements [40 CFR 264.193(b)(4)(i)(2)] to empty the agent holding tank, agent surge tank, spent decontamination holding tanks, and brine surge tanks to allow entry and inspection of the interior to detect corrosion or erosion of the tank sides and bottom. The Army believes that the nondestructive testing methods and detailed inspection procedures described in the following paragraphs will provide sufficient, timely information on the integrity of the tank systems. The Army has expressed concern for the level of safety and the unnecessary risks that may be encountered during vessel entry for internal inspection.

All inspections will be documented. The inspector will complete the Inspection Log Form to indicate the results of the inspection. The inspection logs will be kept on file at the UMCDF.

Tank System External Corrosion and Releases

In addition to the daily inspections, the condition of the tanks will be assessed by nondestructive testing methods, such as ultrasonic wall thickness testing and fiberoptic television camera viewing of tank interior, on a yearly basis to detect corrosion, erosion, cracks, leaks, pitting, or wall thinning to less than sufficient shell thickness. The test methods will be submitted to the Director of Oregon Department of Environmental Quality (ODEQ) for approval prior to use. The results of this testing will be presented in a written report, maintained at the UMCDF in the operating record, and submitted to the Director of ODEQ within 60 calendar days of the performance of the assessment.

The exact test methods will be reviewed in advance to ensure that the procedures to be used will adequately detect corrosion, erosion, cracks, leaks, pitting, or wall thinning to less than sufficient shell strength. The tests will be performed by an established, reliable subcontractor with sufficient experience in these tank testing methods. The results of this assessment will be presented in a written report that will be kept on file at the UMCDF.

Tank System Construction Materials and Surrounding Area

The aboveground portions of the tank systems, including tank shell and bottom, piping and valves, pumps, tank supports, and construction materials, the area around the tank and the secondary containment system will be visually inspected at least once daily to detect corrosion, erosion, or releases of waste. In the Toxic Cubicle or the Spent Decontamination System Room, inspections for the agent holding tank, agent surge tank, and spent decontamination holding tanks, respectively, will be conducted by closed-circuit television cameras. The inspections will be performed, in person, at least once per operating week, when UMCDF personnel enter the Toxic Cubicle and Spent Decontamination System Room for routine operation and maintenance activities. The inspection of other areas of the Munitions Demilitarization Building and the Brine Surge Tank System will be performed in person.

Tank System Overfilling Control Equipment

Overfill controls will be inspected daily when waste is present. The inspection will consist of visual observation of the external overfill controls. An operational check of the mechanical devices, such as level switches and transmitters, will be performed when UMCDF personnel enter the Toxic Cubicle or other respective areas for routine operation and maintenance activities at least once per operating week.

Tank System Monitoring and Leak Detection Equipment

Temperature and pressure will not be measured for chemical agent, spent decontamination solution, or brine. The temperature (except for brine) will be ambient and the pressure will be atmospheric. Data gathered from the leak detection equipment, such as the level indicators in the sumps, will be inspected daily to ensure that the tank system operates according to design specifications.

Sumps, trenches, and external liners will be inspected on a daily basis as a part of the tank systems. The inspection will consist of a visual observation of the sumps, trenches, and external liners, and a check on the operation of the level indicators in the sumps and liners. During chemical agent changeover, or at least on an annual basis, the metal sump will be removed from the concrete liner system for a complete visual inspection of the external liner.

Tank System Cathodic Protection

There will be no cathodic protection systems installed on any of the hazardous waste tank systems at the UMCDF.

Waste Pile Inspection

The UMCDF will have no waste pile units. The requirements of this section are, therefore, not applicable.

Surface Impoundment Inspection

The UMCDF will have no surface impoundments. The requirements of this section are, therefore, not applicable.

Incinerator Inspection

The incinerators and associated equipment will be visually inspected daily for leaks, spills, fugitive emissions, and signs of tampering. Routine daily visual inspections of the incinerators and their associated equipment will be conducted by operations personnel through the use of remote closed-circuit television cameras strategically located in these areas. Use of remote cameras will limit the number of ingress operations into Category A process areas by UMCDF personnel (entry into these areas will require donning complete Demilitarization Protective Ensembles).

When personnel must enter these areas for normal operation and maintenance purposes, routine inspections will be supplemented by the personnel entering the incinerator area and performing a thorough visual inspection of the incinerator and associated equipment. Further information concerning the specifics of the Dunnage Incinerator pollution abatement system can be found in Section D-8 and Attachment D-3. Inspection schedules and inspection procedures can be found in Table F-2-1 and Attachment F-2.

For each incinerator, the automatic waste feed cutoff system and associated alarms will be tested weekly to verify operability. The automatic waste feed cutoffs for the Liquid Incinerators are designated on Table D-5-1, for the Metal Parts Furnace on Table D-6-1, for the Deactivation Furnace System on Table D-7-1, and for the Dunnage Incinerator on Table D-8-1. Positive indications that the waste feed cutoff system and associated alarms are operable will be conducted from the Control Room by manual activation of the cutoff valve and cross-checking the waste feed flow meters. Detailed procedures for testing the waste feed cutoff mechanisms are included in Attachment D-1 for each incinerator system.

The incinerators will be taken offline and a detailed inspection/maintenance operation performed yearly.

The incinerator process monitoring and recording equipment will be calibrated and maintained as designated in Tables D-5-1 and D-5-3 for the Liquid Incinerators; in Tables D-6-1 and D-6-3 for the Metal Parts Furnace; in Tables D-7-1 and D-7-3 for the Deactivation Furnace System; and in Tables D-8-1 and D-8-3 for the Dunnage Incinerator. The equipment listed in these tables will be visually inspected for unusual readings or recorded data that suggest potential malfunctions of the instruments during operation of the incineration systems daily.

Additional incinerator items to be inspected and their frequency are presented in Table F-2-1. A more detailed discussion of incinerator operation is contained in Sections D-5 through D-8.

Landfill Inspection

The UMCDF will have no landfill units. The requirements of this section are, therefore, not applicable.

Land Treatment Facility Inspection

The UMCDF will have no land treatment units. The requirements of this section are, therefore, not applicable.

Miscellaneous Unit Inspection

The Brine Reduction Area evaporator packages, drum dryers, and associated equipment will be inspected on a frequent basis to ensure safe operation and maintenance of the treatment unit.

Each evaporator package will be visually inspected on a daily basis for evidence of corrosion, leakage or other physical damage or proper operation. Inspections include the overfill and spill control equipment, level switches and transmitters, piping and values, skid supports, structure, and pumps. On an annual basis a nondestructive test will be conducted to detect corrosion, erosion, cracks, leaks, pitting, or wall thinning to less than sufficient shell strength.

Each drum dryer will be inspected daily for evidence of corrosion, leakage, or other damage as well as for proper operation. Inspected items for each drum dryer will include overfill and spill control equipment, drum dryer housing, skid support, piping and valves, level switches and transmitters, drum dryer knife blades, end scrapers, conveyors, and drum dryer catch pan.

The secondary containment system will be inspected daily for signs of deterioration, wear and tear, spills, and leaks. Items for inspection will include the general area, sump, sump pump, piping and valves, and level switches and transmitters for proper operation. On an annual basis, the metal sump will be removed for visual inspection of the concrete line.

Routine daily inspections will be conducted visually by operations personnel and inspection results will be documented in Inspection Log Forms. The inspection logs for the evaporator packages, drum dryers, and associated equipment will be kept on file at the UMCDF.

Inspections of the miscellaneous units at the UMCDF, i.e., the Brine Reduction Area evaporator packages and drum dryers, are provided in Table F-2-1 and Attachment F-2.

Inspection for Process Vents

The requirements of this section are not applicable because the UMCDF will not operate any distillation/fractionation, thin film evaporation, or solvent extraction units, and will not conduct air or steam stripping operations.

Inspection Procedures for Equipment Leaks

Applicability and Waste Analysis

The Army has used knowledge of the nature of the hazardous waste streams, the process by which they will be produced, and proposed UMCDF design and operation, to determine, for each piece of equipment, whether the equipment will contain or will contact a hazardous waste with organic concentration that will equal or exceed 10 percent by weight. Liquid chemical agent (which may exist as a heavy liquid or gas/vapor state, meets the criteria of 10 percent or greater organic hazardous constituents. See Tables C-1-9 through C-1-11 for specific composition and percentages of the organics comprising chemical agents GB, VX, and HD. The Army has determined that the following pipes and associated equipment (e.g., pumps and values) will be regulated under 40 CFR 264 Subpart BB:

- The pipes that will carry liquid chemical agent from the Bulk Drain Stations to the agent holding tank and agent surge tank
- The pipes that will carry liquid chemical agent from the Multipurpose Demilitarization Machine to the agent holding tank and agent surge tank
- The pipes that will carry liquid chemical agent from the agent holding tank and agent surge tank to the Liquid Incinerators.
- The manifold piping that will pass vapor from the agent holding tank and agent surge tank to the canister-type carbon filter.

The equipment on the agent holding tank and agent surge tank will also be regulated under this section. Equipment identified as regulated under 40 CFR 264 Subpart BB is provided in Table F-2-2.

There will be no liquid feed lines or pumps and valves associated with any of the other incinerators. Liquid waste feeds to the three spent decontamination holding tanks will contain hazardous wastes with less than 10 percent concentrations of hazardous organic constituents. Each piece of equipment to which the requirements of Subpart BB apply will be marked in a manner to readily distinguish it from other pieces of equipment.

Standards: Pumps in Light Liquid Service

There will not be any pumps in light liquid service at the UMCDF.

Standards: Compressors

There will not be any compressors in service at the UMCDF that will contact chemical agent.

Standards: Pressure Relief Devices in Gas/Vapor Service

The agent holding tank and the agent surge tank will be equipped with a closed-vent system that will lead directly a canister-type carbon filter and then into the negative pressure atmosphere within the Munitions Demilitarization Building. These vapors, along with room air, will pass through the ventilation system carbon filter of the Munitions Demilitarization Building.

Pressure relief devices regulated under this section will include five pressure safety valves on the feed lines to the Liquid Incinerators, one pressure safety valve on the agent holding tank, one pressure safety value on the agent surge tank, one rupture disc on the agent holding tank, one rupture disc on the agent surge tank, and the shutoff valve to the canister-type carbon filter. All of these pressure relief devices will be equipped with a closed-vent system capable of capturing and transporting leakage to the canister-type carbon filter. All of these pressure relief devices will be operated with no detectable emissions, and continually monitored by the Automatic Continuous Air Monitoring System.

Standards: Sampling Connecting Systems

The Liquid Incinerator sampling connection system will be equipped with a closed-purge system. The closed-purge system will return the purged hazardous waste management stream directly to the feed line for the Liquid Incinerators with no detectable emissions to the atmosphere.

Standards: Open-Ended Valves or Lines

Open-ended drains and vents at the UMCDF that contact chemical agent will be equipped with a cap, fluid flange, plug, or second valve. The cap, blind flange, plug, or second valve will seal the opening at all times during operations. If a second valve is used, it will be operated in a manner such that the valve on the hazardous waste stream end will close before the second valve will open.

Standards: Valves in Gas/Vapor Service or in Light Liquid Service

There will not be any valves in light liquid service at the UMCDF because chemical agent is a heavy liquid. However, valves on the manifold piping from the agent holding tank and agent surge tank to the canister-type carbon filter may contain chemical agent in a gas/vapor form and will therefore be subject to this section. In accordance with 40 CFR 264.1057(g), the Army has determined that all valves associated with chemical agent are unsafe to monitor pursuant to the monitoring requirements of 40 CFR 264.1063(b). All valves that will contact or contain chemical agent or vapor will be housed within the Munitions Demilitarization Building and will be continuously monitored by remote monitoring devices (Automatic Continuous Air Monitoring System) for detection of chemical agent releases. In addition, the valves in the manifold piping between the agent holding tank and agent surge tank and the canister-type carbon filter will be visually inspected daily. The Army will use this alternate monitoring plan to eliminate the potential for personnel exposure to the highly toxic waste stream.

Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service, and Flanges and Other Connectors Inspection

Pumps, valves, and pressure relief devices in heavy liquid service are shown in Table F-2-2. All valves, pumps, and pressure relief devices associated with chemical agent will be housed within buildings that will be continuously monitored by remote monitoring devices (Automatic Continuous Air Monitoring System) for detection of chemical agent releases. In addition, pumps and valves associated with chemical agent will be visually inspected for evidence of corrosion and leakage at least once daily.

Standards: Closed-Vent Systems and Control Devices

Control devices regulated under this section will include: 1) the canister-type carbon filter, which will function as a control device for vapor releases from the agent holding tank agent and agent surge tank and 2) the carbon filters in the Munitions Demilitarization Building ventilation filter system into which all vapor releases will be pulled by the negative pressure maintained in the Munitions Demilitarization Building. The ventilation filter system will include nine six-bank carbon filter units. Each six-bank carbon filter unit will have continuous air monitors (Automatic Continuous Air Monitoring System) after the second, third and fourth banks, which will measure the concentration level of chemical agent.

Corrective measures necessary to ensure that the control devices in hazardous service, as defined in this section, will operate in compliance with the requirements of 40 CFR 264.1033(h) and will be implemented immediately. The spent carbon from the carbon filters in the Munitions Demilitarization Building ventilation filter system will be replenished with fresh carbon when chemical agent breakthrough is indicated. The spent carbon from the canister-type carbon filter systems will be replenished monthly.

Alternative Standards for Valves in Gas/Vapor Service or in Light Liquid Service: Percentage of Valve Allowed to Leak

Valves in gas/vapor service will be repaired immediately if leaks occur. The Army will not request alternative standards pursuant to 40 CFR 264.1061.

Alternative Standards for Valves in Gas/Vapor Service or in Light Liquid Service: Skip Period Leak Detection and Repair

Valves in gas/vapor service will be monitored for the minimum required leak detection specifications and repair requirements. Alternative standards will not be requested per 40 CFR 264.1062.

Test Methods and Procedures

The Army will use remote monitoring devices and visual inspection at least once daily in lieu of the test methods and procedures specified in 40 CFR 264.1063(b), as previously discussed. See Attachment F-2 for monitoring procedures.

Remedial Action

Remedial Action - General

If inspections show that non-emergency maintenance is needed, it will be completed as soon as possible to prevent further damage and to reduce the need for subsequent emergency response. If it is found during an inspection (or between inspections) that a hazardous situation is imminent or has already occurred, remedial action measures will be undertaken immediately. A detailed description of remedial action measures and notification procedures for incidents involving hazardous waste release is provided in Sections G-1 and G-4 (Contingency Plan) of this permit application.

Remedial Action for Pumps and Valves

Pumps in Light Liquid Service

There will not be any pumps in light liquid service at the UMCDF.

Valves in Light Liquid Service

There will not be any valves in light liquid service at the UMCDF.

Pressure Relief Devices

Pressure relief devices regulated by this section will be monitored continuously by the Automatic Continuous Air Monitoring System. If a leak is detected, first attempts at repair will be made immediately or no later than five days after the leak is detected. All repairs will be completed within 15 days of leak detection.

Delay of Repair

All repairs will be made on schedule, unless requested per 40 CFR 264.1059.

Inspection Records and Recordkeeping

Inspection Records

Inspection log sheets (as shown in Attachment F-2), including calibration logs (as discussed in Attachment D-1) will be kept at the UMCDF. These will be the written record of the items contained in the inspection schedule. The inspection records will record, at a minimum, the date and time of inspection, inspector's name, a notation of the observation made, and the date and nature of any repairs or other remedial actions. The records will be kept for a minimum of three years from the date of inspection.

Recordkeeping Requirements

The Army will comply with recordkeeping requirements by recording the following information in the UMCDF operating record for each piece of equipment subject to the provisions of 40 CFR 264 Subpart BB: 1) equipment identification number and hazardous waste management unit identification; 2) approximate locations within the UMCDF, (e.g., identify the hazardous waste management unit on a UMCDF plot plan); 3) type of equipment (e.g., a pump or pipeline valve); 4) percent-by-weight total organics in the hazardous waste stream at the equipment; 5) hazardous waste state associated with the equipment (e.g., gas/vapor or liquid);and 6) method of compliance with the standard. This information is summarized in Table F-2-2.

When a leak is detected, the following procedures will be followed as specified in 40 CFR 264.1064(c): 1) a weatherproof and readily-visible identification tag (marked with the equipment identification number, the date evidence of a potential leak was found, and the date the leak was detected) will be attached to the leaking equipment; and 2) the identification tag on equipment, except on a valve, will be removed after it has been repaired.

When a leak is detected, the following information will be recorded in an inspection log and will be kept in the UMCDF operating record: 1) the instrument and operator identification numbers and the equipment identification number; 2) the date evidence of a potential leak was found; 3) the date the leak was detected and the dates of each attempt to repair the leak; 4) repair methods applied in each attempt to repair the leak; 5) "above 10,000" if the maximum instrument reading after each repair attempt is equal to or greater than 10,000 parts per million; 6) the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak; 7) documentation supporting the delay of repair of a valve, in compliance with 40 CFR 264.1059(c); 8) the signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a hazardous waste management unit shutdown; 9) the expected date of successful repair of the leak if a leak cannot be repaired within 15 calendar days; and 10) the date of successful repair of the leak.

The design documentation and the monitoring, operating, and inspection information for each control device required to comply with the provisions of 40 CFR 264.1060 will be recorded and kept up-to-date in the UMCDF operating record, as specified in 40 CFR 264.1035(c). Design documentation is provided in Section D and Attachment D-3 of this permit application. Monitoring, operating, and inspection information is provided in Table F-2-1 and Attachment F-2.

A list of identification numbers for equipment (except welded fittings) subject to the requirements of 40 CFR 264 Subpart BB will be recorded in a log that will be kept in the UMCDF operating record. The following information will be recorded in the UMCDF operating record for valves that comply with 40 CFR 264.1062: 1) a schedule of monitoring; and 2) the percent of valves found leaking during each monitoring period.

Reporting Requirements

In the event of equipment leaks, the Army will submit semi-annual reports to the Director of ODEQ that will provide the information required by 40 CFR 264.1065.

Table F-2-1
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
CONTAINER HANDLING BUILDING		
Munitions and Bulk Items in Onsite Transport Containers or Overpack Containers (for Spray Tanks) Awaiting Transfer to Munitions Demilitarization Building	W	Visually inspect for leaking onsite transport container/ overpack container secured closures; deterioration of onsite transport containers/overpack containers; rust, corrosion, or trends that indicate possible malfunction, such as onsite transport containers/overpack containers out of proper position or alignment; dents, unusual appearance, or signs of tampering.
Onsite Transport Container/ Overpack Container (for Spray Tanks) Condition	A	Conduct nondestructive testing to determine structural integrity.
	W	Monitor onsite transport container/overpack container contents for leakage through chemical agent monitor port.
CONTAINER HANDLING BUILDING (continued)		
Secondary Containment System:		
• General Area	W	Inspect the floor and curbing for cracks, flaking, chips, or gouges and areas that indicate excessive wear or deterioration of protective coating. Inspect roof and walls with regard to structural integrity. Also examine floor for apparent drips, spills, or leaks from the munitions/bulk items in the onsite transport containers/ overpack containers.
• Sump System		
- Sump Structure	D	Visually inspect construction materials for evidence of corrosion, erosion, leaking seams or fixtures, deterioration of coating.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
- Sump Conditions	A	Remove metal sump for visual inspection of concrete liner.
CONTAINER HANDLING BUILDING (continued)		
Secondary Containment System (continued):		
• Sump System (continued)		
- Trench Structure	D	Visually inspect construction materials for evidence of corrosion, erosion, leaking seams or fixtures, or deterioration of coating.
- Trench Conditions	A	Remove metal sump for visual inspection of concrete liner.
- Piping and Valves	D	Visually inspect for evidence of corrosion and leakage.
Bridge Crane System	W	Visually inspect for deterioration of hoist, excessive wear, or deterioration of the mechanisms or trends that indicate potential malfunction. Inspect lift area for apparent leaks from munitions/bulk items in onsite transport containers/ overpack containers (for spray tanks).
Lift System	W	Visually inspect for deterioration or excessive wear of the mechanisms, or trends that indicate potential malfunction. Inspect lift area for apparent leaks from munitions/bulk items in onsite transport containers/ overpack containers (for spray tanks).

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
Pneumatic Roller Track Conveyor	W	Visually inspect for deterioration or excessive wear of conveyor or deterioration of mechanisms, or trends that indicate potential malfunction. Inspect areas for apparent drips, spills, or leaks from munitions/ bulk items in onsite transport containers/overpack containers.
UNPACK AREA		
Conveyor Systems	M	Remove and clean chain guard; inspect chain for adequate lubrication; clean around grease fittings and vent fittings as necessary; clean bearing housings; inspect seals for excessive lubricant leakage; reinstall chain guard and inspect for proper alignment.
Airlock	M	Remove airlock side panels as necessary to provide access to conveyor components; remove and clean chain guard; clean chain sprockets of conveyor drive; examine sprocket teeth and chain for wear indicating misalignment between sprockets; realign sprockets if necessary.
ROCKET PROCESSING SYSTEM		
Computerized Automatic Control System Interlocks	D	Run computer scans.
Monorail with Lifting Device System	D	Perform functional check for correct operation.
	M	Inspect bearings and electrical connections.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
Rocket Metering Input Assembly	W	Visually check for vibration and noise. Visually inspect clutch; adjust and tighten, if necessary.
	M	Inspect roller chain; adjust and tighten if necessary; clean and test clutch.
Rotary Metering System	M	Clean accumulated dirt and oil from drive chain and sprockets; check clutch brake for proper operation; check motor, clutch brake, gear box, and drum bearing pillow blocks for excessive temperature; inspect for worn or damaged chain and sprockets; examine for excessive noise, vibration, damage, leakage, and loose parts. Align sprockets and adjust chain tension if needed; lubricate chain if needed.
Blast Valves	W	Check for correct operation; check for hydraulic fluid leaks.
Blast Gates	W	Inspect gate gasket; inspect closure surfaces; manually inspect gate latch assembly for proper operation; manually inspect gate opening and closing mechanism for proper operation; repair and replace components showing signs of corrosion or wear.
Vent Punch	W	Visually inspect punch and drain assembly, hydraulic cylinders, gears, pusher assembly, and puncher; repair or adjust as necessary.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
Rocket Shear Machine/ Burster Size Reduction Machine	W	Inspect shear station bolster rods for adequate lubrication; inspect bolster rod wipers for damage and excessive wear; check shear blade for chips, cracks, wear, and proper alignment; inspect hydraulic valves for leaks, cracks, and loose mountings; inspect all hydraulic hoses, tubes, and cylinders for cracks, looseness, wear, leaks, and dents; examine for excessive noise, vibration, damage, leakage, and loose parts; observe operation of shear head to check alignment of shear head on bolster rods; observe operation of pusher drive roller chain for proper tension; shut down equipment and realign or adjust tension if needed; inspect electrical conduit for cracks, breaks, and loose connections.
Conveyor Systems	M	Remove and clean chain guard; clean around grease fittings and vent fittings as necessary; inspect chain for adequate lubrication; clean bearing housings; inspect seals for excessive lubricant leakage. Reinstall chain guard and inspect for proper alignment.
MINE PROCESSING SYSTEM		
Computerized Automatic Control System Interlocks	D	Run computer scan.
Monorail with Lifting Device System	D	Perform functional check for correct operation.
	M	Inspect bearings and electrical connections.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
MINE PROCESING SYSTEM (continued)		
Conveyor Systems	M	Remove and clean chain guard; clean around grease fittings and vent fittings as necessary. Inspect chain for adequate lubrication; clean bearing housings; inspect seals for excessive lubricant leakage. Reinstall chain guard and inspect for proper alignment.
Glove Box	W	Visually inspect for correct operation. Check gloves for leaks; clean gloves.
Blast Gates	W	Inspect gate gasket; inspect closure surfaces; manually inspect gate latch assembly for proper operation; manually inspect gate opening and closing mechanism for proper operation. Clean closure surfaces, if necessary, to hold tight seal. Repair and replace components showing signs of corrosion or wear.
Blast Valves	W	Check for correct operation; check for hydraulic fluid leaks.
Mine Machine	W	Visually inspect conveyor, hydraulic cylinders, accumulator; check orientation station.
	M	Lubricate conveyor parts.
Mine Orientation Station	W	Clean and visually inspect punch and drain assembly.
Burster Punch Station	W	Clean and visually inspect punch and drain assembly.
PROJECTILE PROCESSING SYSTEMS		
Computerized Automatic Control System Interlocks	D	Run computer scan.
Monorail with Lifting Device System	D	Perform functional check for correct operation.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
PROJECTILE PROCESSING SYSTEMS (continued)		
	M	Inspect bearings and electrical connections.
Projectile Metering System	M	Visually check for vibration and noise; visually inspect clutch. Inspect roller chain. Adjust and tighten if necessary; clean and test clutch.
Rotary Metering System	M	Check clutch brake for proper operation; check motor, clutch brake, gear box, and drum bearing billow blocks for excessive temperature; inspect for worn or damaged chain and sprockets; examine for excessive noise, vibrations, damage, leakage, and loose parts. Align sprockets and adjust chain tension if needed. Lubricate chain if needed.
Conveyor Systems	M	Inspect chain for adequate lubrication; remove and clean chain guard; clean around grease fittings and vent fittings as necessary; clean bearing housings; inspect seals for excessive lubricant leakage. Reinstall chain guard and inspect for proper alignment.
Blast Gates	W	Inspect gate gasket; replace gate gasket if it cannot hold a tight seal. Inspect closure surfaces; clean closure surfaces if necessary to hold tight seal. Manually inspect gate latch assembly for proper operation; manually inspect gate opening and closing mechanism for proper operation. Repair and replace components showing signs of corrosion or wear.
Blast Valves	W	Check for correct operation; check for hydraulic fluid leaks.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
PROJECTILE PROCESSING SYSTEMS (continued)		
Projectile/Mortar Disassembly Machines	D	Inspect miscellaneous parts, conveyor, and surrounding area for explosive or simulant--remove buildup, if found; inspect Burster Removal Station pressure differential head assembly slide bearings for excessive wear, replace if necessary; inspect Burster Removal Station pressure differential head ring seals for damage or excessive wear, replace if necessary; wipe grit from bolster rods with clean cloth.
Multiposition Loader	W	Inspect timing belt for excessive wear or fraying, replace if necessary; inspect pneumatic system to verify no air leakage; inspect bolts, clamps, nuts, and screws for looseness, tighten as necessary. Verify emergency stop pressure switch setting at 70±5 pounds per square inch.
Lift Station	D	Visually inspect and test for correct operation.
Pick and Place Unit	D	Visually inspect and test for correct operation.
BULK ITEM (TON CONTAINERS, BOMBS, AND SPRAY TANKS) PROCESSING SYSTEM		
Computerized Automatic Control System Interlocks	D	Run computer scan.
Monorail with Lifting Device System	D	Perform functional check for correct operation.
	M	Inspect bearings and electrical connections.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
BULK ITEM (TON CONTAINERS, BOMBS, AND SPRAY TANKS) PROCESSING SYSTEM (continued)		
Conveyor Systems	M	Remove and clean chain guard; clean around grease fittings and vent fittings as necessary; inspect chain for adequate lubrication; clean bearing housings; inspect seals for excessive lubricant leakage. Reinstall chain guard and inspect for proper alignment.
Bulk Drain Station	D	Check hydraulic supply pressure gauge.
Bulk Drain Station	W	Inspect punch for chipping or damage, replace if necessary; inspect drain probe for bending or damage to spring tip, replace if necessary; inspect bolts, clamps, nuts, and screws for looseness, tighten as necessary; inspect all sensor mountings to assure mounting brackets are secure, adjust and tighten as necessary; check gear reducer unit oil condition and level, replace or refill as necessary; check for excessive vibration or unusual noises during operation, repair as necessary.
Lift Station	D	Visually inspect and test for correct operation.
DUNNAGE INCINERATOR		
Combustion System (Exterior)	D	Visually[b] inspect for leaks, spills, fugitive emissions, and signs of tampering.
Flame Safeguard Ultraviolet Sensors	D	Check for proper voltage output at local control panel (>0 mV).

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
DUNNAGE INCINERATOR (continued)		
High Temperature Safety Shutdown and Temperature Controls	D	Observe temperature readouts in Control Room: Primary chamber = 1,800°F Afterburner = 2,000°F ±150°F
Primary Combustion Chamber	D	Visually[b] inspect for leaks, spills, fugitive emissions, and signs of tampering.
Ash Discharge and Collection	D	Visually[b] inspect for leaks, spills, fugitive emissions, and signs of tampering.
Waste Feed Cutoff Mechanisms	W	Test control circuit and document waste feed cutoff.
Combustion Air Blowers	W	Visually inspect for loss of lubrication, check for vibration, and inspect bearings for overheating.
Incinerator Hardware, Such as Pumps, Valves, Pipes, Pipe Fittings, etc.	D	Visually[b] inspect for leaks, spills, fugitive emissions, and signs of tampering.
DEACTIVATION FURNACE SYSTEM		
Combustion System (Exterior)	D	Visually[b] inspect for leaks, spills, fugitive emissions, and signs of tampering.
Flame Safeguard Ultraviolet Sensors	D	Check for proper voltage output at local control panel (>0 mV).
High Temperature Safety Shutdown and Temperature Controls	D	Observe temperature readouts in Control Room: Rotary retort = 1,000°F-1,800°F Afterburner = 2,000°F ±150°F (2,200°F when processing rockets)

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
DEACTIVATION FURNACE SYSTEM (continued)		
Ash Collection and Containers	D	Visually[b] inspect for leaks, spills, fugitive emissions, and containers out of place.
Combustion Air Blowers	W	Visually[b] inspect for loss of lubrication, check for vibration, and inspect bearings for overheating.
Rotary Retort Drive	W	Visually[b] inspect accessible areas for loss of lubrication, check for vibration, inspect bearings for overheating, inspect shaft and gears for signs of binding.
Heated Discharge Conveyor	D	Visually[b] inspect accessible areas for loss of lubrication, check for vibration, inspect bearings for signs of overheating, inspect conveyor belt for physical integrity and alignment, inspect shafts and gears for signs of binding.
Waste Feed Cutoff Mechanisms	W	Test control circuits and document waste feed cutoff.
Incinerator Hardware, Such as Pumps, Valves, Pipes, Pipe Fittings, etc.	D	Visually[b] inspect for leaks, spills, fugitive emissions, and signs of tampering.
Blast Gates	W	Inspect door gaskets; inspect closure surfaces; manually inspect door opening and closing mechanism for proper operation; repair and replace components showing signs of corrosion or wear.
Blast Valves	W	Check for correct operation; check for hydraulic fluid leaks.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
LIQUID INCINERATORS (LIC-FURN-101/201 AND LIC-FURN-102/102)		
Combustion System (Exterior)	D	Visually[b] inspect for leaks, spills, fugitive emissions, and signs of tampering.
Flame Safeguard Ultraviolet Sensors	D	Check for proper voltage output at local control panel (>0 mV).
High Temperature Safety Shutdown and Temperature Controls	D	Observe temperature readouts in Control Room: Primary chamber = 2,700°F ±150°F Secondary chamber = 2,000°F ±150°F
Waste Feed Cutoff Mechanisms	W	Test control circuits and document waste feed cutoff.
Combustion Air Blowers	W	Visually[b] inspect for loss of lubrication, check for vibration, inspect bearings for overheating.
Primary Chamber Burner Block Atomizing Nozzle	D	Visually[b] observe pressure of atomizing air and pressure of liquid chemical agent line in Control Room. Check that the low pressure switches show closed contacts.
Secondary Chamber Spent Decontamination Solution Atomizing Nozzle	D	Visually[b] observe pressure of atomizing air and pressure of liquid spent decontamination solution in Control Room. Check that the low-pressure switches show closed contacts.
Incinerator Hardware, Such as Pumps, Valves, Pipes, Pipe Fittings, etc.	D	Visually[b] inspect for leaks, spills, fugitive emissions, and signs of tampering.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
METAL PARTS FURNACE		
Combustion System (Exterior)	D	Visually[b] inspect for leaks, spills, fugitive emissions, and signs of tampering.
Flame Safeguard Ultraviolet Sensors	D	Check for proper voltage output at local control panel (>0 mV).
High Temperature Safety Shutdown and Temperature Controls	D	Observe temperature readouts in Control Room: Burnout chamber exhaust = 1,600°F (1,400°F for ton containers and mine drums) Afterburner = 2,000°F ±150°F
Burnout Chamber	D	Visually[b] inspect for leaks, spills, fugitive emissions, and signs of tampering.
Waste Feed Cutoff Mechanisms	W	Test control circuit and document waste feed cutoff.
Combustion Air Blower	W	Visually[b] inspect for loss of lubrication, check for vibration, inspect bearings for overheating.
Incinerator Hardware, Such as Pumps, Valves, Pipes, Pipe Fittings, etc.	D	Visually[b] inspect for leaks, spills, fugitive emissions, and signs of tampering.
DUNNAGE INCINERATOR POLLUTION ABATEMENT SYSTEM		
Quench Pump	D	Visually inspect for leakage, check for excessive noise and vibration, inspect for overheating.
Exhaust Blower	D	Visually inspect for loss of lubrication, check for vibration, inspect bearings for overheating.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
DUNNAGE INCINERATOR POLLUTION ABATEMENT SYSTEM (continued)		
Pollution Abatement System	D	Visually inspect for leaks, spills, fugitive emissions, and signs of tampering.
Stack Monitors	D	Check calibration.
Stack	D	Observe opacity.
Quench Tower	W	Visually inspect shell for corrosion.
Emergency Exhaust Blower	W	Visually inspect for necessary maintenance.
Baghouse:		
• Baghouse Bags	W	Visually check for integrity of bags.
• Thermocouple on Gas Stream to Baghouse	D (When operating with hazardous waste feed to the Dunnage Incinerator)	Visually observe calibration of thermocouple.
• Pressure Drop Across Baghouse	D (When operating with hazardous waste feed to the Dunnage Incinerator)	Visually observe calibration of differential pressure devices.
• Pressure Drop Access Collector	D	Visually observe calibration of differential pressure devices; drain accumulated moisture from the accumulator and from the air compressor.
• Pulse Timer	D	Inspect for proper operation.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
Baghouse (continued):		
• Cleaning Air Pressure	D	Check that pressure is at 80-100 pounds per square inch or 40-60 pounds per square inch for fiberglass bags.
• Rotary Valve	D	Visually inspect for dust discharge in normal fashion; check oil level in gear box.
• Screw Conveyor	D	Visually inspect for dust discharge in normal fashion; check oil level in gear box.
• Rotating Equipment	D	Visually inspect equipment and drives for signs of wear, broken parts, and leakage. Make repairs as required.
• Exhaust	D	Visually inspect for clear dust.
• Clean Air Plenum	W	Visually inspect for signs of dust or moisture.
• Air Compressor	W	Inspect oil level.
• Ductwork	W	Inspect for obstructions or dust buildup.
• Collector Flange Joints	A	Inspect for leaks. Tighten and re-gasket or caulk as required.
• Structural Steel Connections	A	Inspect for tightness of bolts and reweld as necessary.
• Mechanical Equipment	A	Inspect for rust or corrosion; clean and repaint as necessary.
• Support Steel	A	Inspect for rust or corrosion; clean and repaint as necessary.
• Collector	A	Inspect for rust or corrosion; clean and repaint as necessary.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
DUNNAGE INCINERATOR POLLUTION ABATEMENT SYSTEM (continued)		
Carbon Filter System:		
• General System	W	Visually inspect for evidence of corrosion, malfunctions, leaks, or excessive wear.
• Pressure Gauges	D	Check for pressure drop.
• Air Flow	D	Check that monitor is reading in appropriate range.
• Monitor	D	Visually inspect for evidence of corrosion and physical integrity.
	W	Check for correct calibration.
• Instrumentation	W	Check for correct calibration of pressure and airflow instrumentation.
• Damper	A	Check elastomeric seals and bearings for excessive wear.
• Carbon Filters	Every 18 months[c]	Perform leak testing.
POLLUTION ABATEMENT SYSTEMS FOR DEACTIVATION FURNACE SYSTEM, LIQUID INCINERATORS, AND METAL PARTS FURNACE		
Exhaust Blower	D	Visually inspect for loss of lubrication, check for vibration, inspect bearings for overheating.
Venturi Plug Valve	D	Check to assure that valve freely operates.
Pollution Abatement System	D	Visually inspect for leaks, spills, fugitive emissions, and signs of tampering.
Stack	D	Observe opacity.
Stack Monitors	D	Check calibration.
Scrubber Tower	W	Visually inspect shell for corrosion.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
POLLUTION ABATEMENT SYSTEMS FOR DEACTIVATION FURNACE SYSTEM, LIQUID INCINERATORS, AND METAL PARTS FURNACE (continued)		
Quench Tower	W	Visually inspect shell for corrosion.
Demister Vessel	W	Visually inspect shell for corrosion.
Emergency Exhaust Blower (MPF and DFS only)	W	Visually inspect for necessary maintenance.
Thermocouple on Gas Stream Entering Venturi Scrubber	D	Visually observe calibration of thermocouple.
Pressure Drop Across Venturi Scrubber	D	Visually inspect calibration of differential pressure devices.
Carbon Filter System:		
• General System	W	Visually inspect for evidence of corrosion, malfunctions, leaks, or excessive wear.
• Pressure Gauges	D	Check for pressure drop.
• Air Flow	D	Check that monitor is reading in appropriate range.
• Monitor	D	Visually inspect for evidence of corrosion and physical integrity.
	W	Check for correct calibration.
• Instrumentation	W	Check for correct calibration of pressure and airflow instrumentation.
• Damper	A	Check elastomeric seals and bearings of excessive wear.
• Carbon Filters	Every 18 months[c]	Perform leak testing.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
POLLUTION ABATEMENT SYSTEM FOR BRINE REDUCTION AREA		
Ductwork that Connects Evaporators and Drum Dryers to the Baghouses	M	Visually inspect for presence of liquid or salt buildup.
Exhaust Blower	D	Visually inspect for loss of lubrication; check for vibration; inspect bearing for overheating.
Stack	D	Observe opacity.
Stack Monitors	D	Visually observe calibration.
Dryer Knockout Box	D	Inspect manway cover, knife gate, and flashing for salt residue buildup. Inspect discharge container for the presence of hazardous waste label and ensure label is dated and that the label date does not exceed 90 days. Inspect transfer hose for cracks or tears. Inspect outside of container and area around container for salt residue.
Ductwork	M	Visually inspect for presence of liquids and salt buildup.
Baghouses:		
• Baghouse Bags	W	Visually inspect for integrity of bags.
• Thermocouple on Gas Stream to Baghouse	D	Visually observe calibration of thermocouple.
• Pressure Drop Across Baghouse	D (When in Operation)	Visually observe pressure reading. Check calibration of differential pressure devices.
• Pressure Drop Across Collector	D	Visually observe calibration of differential pressure devices; drain accumulated moisture from the accumulator and from the air compressor.
• Pulse Timer	D	Inspect for proper operation.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
POLLUTION ABATEMENT SYSTEM FOR BRINE REDUCTION AREA (continued)		
Baghouse (continued)		
• Cleaning Air Pressure	D	Check that pressure is at 80-100 pounds per square inch or 40-60 pounds per square inch for fiberglass bags.
• Rotary Valve	D	Visually inspect for dust discharge in normal fashion; check oil level in gear box.
• Screw Conveyor	D	Visually inspect for dust discharge in normal fashion; check oil level in gear box.
• Rotating Equipment	D	Visually inspect equipment and drives for signs of wear, broken parts, and leakage.
• Exhaust	D	Visually inspect for clear dust.
• Clean Air Plenum	D	Visually inspect for signs of dust or moisture.
• Air Compressor	D	Inspect oil level.
• Ductwork	W	Inspect for obstructions or dust buildup.
• Collector Flange Joints	A	Inspect for leaks.
• Structural Steel Connections	A	Inspect for tightness of bolts.
• Mechanical Equipment	A	Inspect for rust or corrosion.
• Support Steel	A	Inspect for rust or corrosion.
• Collector	A	Inspect for rust or corrosion.
• Baghouse Pad Sump	D	Presence of liquids.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
AGENT HOLDING TANK AND AGENT SURGE TANK: ACS-TANK-101 AND ACS-TANK-102		
Overfill/Spill Control Equipment	D	Visually[d] inspect for evidence of corrosion, leakage, or other physical damage.
Level Switches and Transmitters	D	Check transmitters for proper operation at control panel.
Tank Structure	D	Visually[d] inspect for evidence of corrosion, erosion, and leaking seams or fixtures.
Tank Area	D	Visually[d] inspect for evidence of leakage on floor.
Piping and Valves	D	Visually[d] inspect for evidence of corrosion and leakage.
Pump	D	Visually[d] inspect glands and connections for evidence of leakage; with pump operating, check for excessive noise and vibration.
Tank Supports	D	Visually[d] inspect for evidence of corrosion.
Tank Conditions	A	Conduct nondestructive testing to detect corrosion, erosion, cracks, leaks, pitting, or wall thinning to less than sufficient shell strength.
Canister-Type Carbon Filter	D	Visually[d] inspect for corrosion, leakage, or other physical damage. Replace carbon filter as necessary.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
AGENT HOLDING TANK AND AGENT SURGE TANK (ACS-TANK 101 AND ACS-TANK 102) SECONDARY CONTAINMENT SYSTEM		
General Area	D	Visually[d] inspect the floor and curbing for cracks, flaking, chips, or gouges, and areas that indicate excessive wear or deterioration of protective coating. Also examine floor and sump area for apparent drips, spills, or leaks.
Sump System No. MDB-SUMP-134:		
• Sump Structure	D	Visually[d] inspect construction materials for evidence of corrosion, erosion, leaking seams or fixtures, or deterioration of coating.
• Sump Conditions	A	Remove metal sump for visual inspection of concrete liner.
• Piping and Valves	D	Visually[d] inspect for evidence of corrosion and leakage.
• Sump Pump	D	Visually[d] inspect glands and connections for evidence of leakage; with pump operating, check for excessive noise and vibration.
• Level Switches and Transmitters	D	Check transmitters for proper operation at control panel.
SPENT DECONTAMINATION HOLDING TANKS: SDS-TANK-101, SDS-TANK-102, AND SDS-TANK-103		
Overfill/Spill Control	D	Visually[e] inspect for evidence of corrosion, leakage, or other physical damage.
Level Switches and Transmitters	D	Check transmitters for proper operation at control panel.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
SPENT DECONTAMINATION HOLDING TANKS: SDS-TANK-101, SDS-TANK-102, AND SDS-TANK-103 (continued)		
Tank Structure	D	Visually[e] inspect for evidence of corrosion, erosion, leaking seams or fixtures.
Tank Area	D	Visually[e] inspect for evidence of leakage on floor.
Piping and Valves	D	Visually[e] inspect for evidence of corrosion and leakage.
Pump	D	Visually[e] inspect glands and connections for evidence of leakage. With pump operating, check for excessive noise and vibration
Tank Supports	D	Visually[d] inspect for evidence of corrosion.
Tank Conditions	A	Conduct nondestructive testing to detect corrosion, erosion, cracks, leaks, pitting, or wall thinning to less than sufficient shell strength.
General Area	D	Inspect the floor and curbing for cracks, flaking, chips, gouges, or areas that indicate excessive wear or deterioration of protective coating. Also examine floor and sump area for apparent drips, spills, or leaks.
Sump System No. MDB-SUMP-135:		
• Sump Structure	D	Visually[e] inspect construction materials for evidence of corrosion, erosion, leaking seams or fixtures, or deterioration of coating.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
SPENT DECONTAMINATION HOLDING TANKS: SDS-TANK-101, SDS-TANK-102, AND SDS-TANK-103 (continued)		
Sump System No. MDB-SUMP-135 (continued):		
• Sump Conditions	A	Remove metal sump for visual inspection of concrete liner.
• Piping and Valves	D	Visually[e] inspect for evidence of corrosion or leakage.
• Sump Pump	D	Visually[e] inspect glands and connections for evidence of leakage. With pump operating, check for excessive noise and vibration.
• Level Switches and Transmitters	D	Check transmitters for proper operation at control panel.
BRINE SURGE TANKS: BRA-TANK-101, BRA-TANK-102, BRA-TANK-201, AND BRA-TANK-202		
Overfill/Spill Control Equipment	D	Visually inspect for evidence of corrosion, leakage, or other physical damage.
Level Switches and Transmitters	D	Check transmitters for proper operation.
Tank Structure	D	Visually inspect for evidence of corrosion, erosion, or leaking seams or fixtures.
Tank Area	D	Visually inspect for evidence of leakage on floor of diked area.
Piping and Valves	D	Visually inspect for evidence of corrosion and leakage.
Pump	D	Visually inspect glands and connections for evidence of leakage; with pump operating, check for excessive noise and vibration.
Tank Supports	D	Visually inspect for evidence of corrosion.
Tank Conditions	A	Conduct nondestructive testing to detect corrosion, erosion, cracks, leaks, pitting, or wall thinning to less than sufficient shell strength.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
BRINE SURGE TANKS (BRA-TANK-101, BRA-TANK-102, BRA-TANK-201, AND BRA-TANK-202) SECONDARY CONTAINMENT SYSTEM		
General Area	D	Inspect the floor and curbing for cracks, flaking, chips, or gouges, and areas that indicate excessive wear or deterioration of protective coating. Also examine floor and sump area for apparent drips, spills or leaks.
Sump System No. BRA-SUMP-101:		
• Sump Structure	D	Visually inspect construction materials for evidence of corrosion, erosion, leaking seams or fixtures, or deterioration of coating.
• Sump Conditions	A	Remove metal sump for visual inspection of concrete liner.
• Piping and Valves	D	Visually inspect for evidence of corrosion and leakage.
• Sump Pump	D	Visually inspect glands and connections for evidence of leakage. With pump operating, check for excessive noise and vibration.
• Level Switches and Transmitters	D	Check transmitters for proper operation at control panel.
EMERGENCY GENERATOR		
Engine/Generator	M	Visually inspect for loose drive belts, oil leaks, coolant leaks, lube oil level, mechanical integrity, oil leaks, and crankcase containment.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
EMERGENCY GENERATOR (continued)		
	M	Start unit with Uninterruptible Power Supply battery power; check governor speed, voltage output regularity, noise level, filter differential pressure, overspeed safety trip, low oil pressure protective device, high water temperature instruments, electrical output, phase balance, and fuel oil and lube oil pump pressures.
COMMUNICATION		
		Inspect equipment for proper operation of:
Radio (Demilitarization Protective Ensemble)	W	Audibility
Radio (Security)	W	Audibility
Telephones	W	Audibility
		Inspect equipment for proper operation of:
Public Address System	W	Audibility
Closed Circuit Television Cameras	W	Visual clarity/tilt, pan, and zoom function
SECURITY		
Gates	D	Operate sallyport vehicle and personnel gate interlock override to assure capability for emergency ingress/egress.
Locks	D	Check locks on unused gates and all buildings.
Fences	D	Check for integrity, intrusion or obstruction by vegetation, and gaps at fence base.
Lighting	D	Check for proper functioning, masking of lighted areas by vegetation.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
SECURITY (continued)		
Warning Signs	D	Check for missing signs, proper appearance, and signs of tampering.
PROTECTIVE CLOTHING		
Demilitarization Protective Ensembles:		
• Demilitarization Protective Ensemble Respirator, Radio Sets, Outer Gloves, and Boots	D	Visually inspect equipment to ensure they were tagged for reuse; ensure a quantity of 10 Demilitarization Protective Ensemble outergarments on hand for Demilitarization Protective Ensemble operations; ensure emergency air bottles stored in Demilitarization Protective Ensemble Support Area are filled.
• Outergarment	D	Check tag on garment in Demilitarization Protective Ensemble Support Area to ensure they were inspected after removal from manufacturer's package; inspect garments to ensure they have been properly hung and aired out; ensure quantity of 10 Demilitarization Protective Ensemble outergarments on hand for Demilitarization Protective Ensemble operation.
• Life Support System Air	D	Check remote valves to air manifold to ensure air can be turned on.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
PROTECTIVE CLOTHING (continued)		
• Self-Contained Breathing Apparatus	Each Use as required by Occupational Safety and Health Administration regulations	Perform user function tests and inspection prior to donning. Check pressure gauge to assure that the tank is full. Check straps and base for wear or cracks. Open air valve. Breathe with facepiece to ensure that the air is available.
	W	Perform inspection per manufacturer's recommendation [29 CFR 1910.134(f)(ii) requires monthly inspection]. Replace tank after hydrostatic testing as needed.
• Demilitarization Protective Ensemble Leak Detector	D	Inspect operators log to ensure that daily check is made on helium tester.
Toxicological Agent Protective Clothing:	D	Visually inspect clothing to ensure it has been tagged for use.
• Protective Mask	D	Check log or tag to ensure mask has new canister and filter.
AUTOMATIC CONTROL SYSTEM		
Control Room Alarm Panels	D	Check integrity of audible/visual alarm.
FIRE PROTECTION SYSTEM		
Alarms (Fire)	W	Check for operability.
Extinguishers (Manual)	M	Check for condition and gauge pressure.
Fire Extinguishing Medium for Control Room	M	Check for pressure.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
FIRE PROTECTION SYSTEM (continued)		
Smoke Detectors	M	Check for proper operation.
Dry Chemical Fire Protection System in Toxic Cubicle	M	Check for proper operation.
Sprinkler System	A	Inspect in accordance with fire codes and regulations.
TRANSPORTATION VEHICLES USED FOR ONSITE TRANSPORT OF HAZARDOUS WASTE		
Engine Fluid Levels (Oil, Coolant, Brake Fluid, and Hydraulic Fluid)	D (when in use)	Low fluid levels.
Other Items (Safety Lights, Gauges, Horn, Backup Horn, Brakes, Steering, Fire Extinguisher)	D (when in use)	Check for operability and signs of needed maintenance.
EMERGENCY TRANSPORT		
Emergency Vehicle	W	Parked at proper location; started and runs properly; gas tank more than one-half full.
EMERGENCY EQUIPMENT STORAGE STATIONS (PERSONNEL AND MAINTENANCE BUILDING AND MUNITIONS DEMILITARIZATION BUILDING)		
Laundry, Personnel Change Rooms, and Demilitarization Protective Ensemble Support Area:	M	Sufficient inventory, expiration dates have not lapsed (where applicable).
• Impermeable Toxic Agent Suit w/Hood (6)		
• M-9, M-17 or M-40 Mask (6)		

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
EMERGENCY EQUIPMENT STORAGE STATIONS (PERSONNEL AND MAINTENANCE BUILDING AND MUNITIONS DEMILITARIZATION BUILDING) (continued)		
Laundry, Personnel Change Rooms, and Demilitarization Protective Ensemble Support Area (continued):		
• M11 Canister		
• Rubber Aprons (6)		
• Rubber Gloves (12 pair)		
• Rubber Boots (12 pair)		
• Stretchers (2)		
• Round Point Shovel (5)		
• Corn Broom (5)		
• Rake (5)		
• Brush, with Handle (5)		
• 3-Gallon Bucket (5)		
• 55-Gallon Drum (5)		
Laundry, Personnel Change Rooms, and Demilitarization Protective Ensemble Support Area (continued):		
• Bags of Impregnated Underclothing (12)		
• Butyl Rubber Overboots (6 pair)		
• Hammer (1)		
• Screwdriver (1)		
• Duct Tape (12 rolls)		

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
EMERGENCY EQUIPMENT STORAGE STATIONS (PERSONNEL AND MAINTENANCE BUILDING AND MUNITIONS DEMILITARIZATION BUILDING) (continued)		
• Emergency Response Team Truck (at Laundry) (1)		
• Absorbent Pads/Bales, Bags, Rags, etc.		
• Truck-Mounted Power-Driven Decontamination Apparatus (1)		
Laundry, Personnel Change Rooms, and Demilitarization Protective Ensemble Support Area (continued):		
• One-Ton Container Capping Kit (Valves, Plugs, etc.) (1)		
• Individual Decontamination and Reimpregnating Kit (1)		
• Rubber Hoods (6)		
• Case of M-9, M-17, or M-40 Canisters (1)		
• Utility Wipes, Box (1)		
• Spray Disinfectant (2)		
• Plastic Bags, Box (2)		
• Rubber Goods Hamper (1)		
• Detector Kits (6)		

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
EMERGENCY EQUIPMENT STORAGE STATIONS (PERSONNEL AND MAINTENANCE BUILDING AND MUNITIONS DEMILITARIZATION BUILDING) (continued)		
Laundry, Personnel Change Rooms, and Demilitarization Protective Ensemble Support Area (continued):		
• Chemical Agent Antidote Kits (2)		
• Radio Transmitter (1)		
• Personnel Decontamination Station (1)		
• Decontaminating Apparatus, Power-Driven ABC-M11 (4)		
• Gloves, Canvas/Leather (2 pair)		
• First Aid Packet (1)		
• Compass		
• Canteen (1)		
• Poncho (1)		
Laundry, Personnel Change Rooms, and Demilitarization Protective Ensemble Support Area (continued):		
• Flashlight (1)		
• Tape, Textile, White (1)		
• Chemical Hazard Signs (1)		
• Antiset, DS2 (1)		
• Notebook Paper (1)		

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
EMERGENCY EQUIPMENT STORAGE STATIONS (PERSONNEL AND MAINTENANCE BUILDING AND MUNITIONS DEMILITARIZATION BUILDING) (continued)		
Emergency Equipment Area:		
Rubber Goods (For Protection Against Liquid)	W	Sufficient inventory for each item listed and expiration dates have not lapsed (where applicable).
• Rubber Suits (6)		
• Rubber Aprons (6)		
Emergency Equipment Area (continued):		
• Rubber Boots (Assorted Sizes 12 pairs)		
• Rubber Hoods (6)		
• Rubber Gloves (12 pairs)		
• Rubber Overboots (6 pairs)		
• Impregnated Clothing (Assorted Sizes, 12 Bags)		
• M-9 Masks (Assorted Size, 6)		
• M-9 Mask Canisters (1 Case)		
• Coveralls, Explosive Handlers (Assorted Sizes, 12)		
EMERGENCY EQUIPMENT STORAGE STATIONS (PERSONNEL AND MAINTENANCE BUILDING AND MUNITIONS DEMILITARIZATION BUILDING) (continued)		
Miscellaneous Items:	W	Sufficient inventory for each item listed and expiration dates have not lapsed (where applicable).
• Utility Wipes (2 Boxes)		

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
EMERGENCY EQUIPMENT STORAGE STATIONS (PERSONNEL AND MAINTENANCE BUILDING AND MUNITIONS DEMILITARIZATION BUILDING) (continued)		
• Spray Disinfectant (2 Cans) • Duct Tape (12 Rolls) • Plastic Bags (2 Boxes) • Hamper for Used Rubber Goods (1) • Detector Kits (6) • Shovel, Round Point (5) • Broom, Corn (5) • Rake (5) • Brush, w/Handle (5) Miscellaneous Items (continued): • Bucket, 3 Gallon (5) • Drum, 55 Gallon, Open Top (5) • Hammer (1) • Screwdriver (1) • Absorbent Pads/Bales, Bags, Rags • One-Ton Container Capping Kit (1)		
Demilitarization Protective Ensemble Support Area Locker Rooms:	W	Sufficient inventory for each item listed and expiration dates have not lapsed (where applicable).

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
EMERGENCY EQUIPMENT STORAGE STATIONS (PERSONNEL AND MAINTENANCE BUILDING AND MUNITIONS DEMILITARIZATION BUILDING) (continued)		
• Towels (12)		
• Shower Boots (12 pair)		
• Coveralls (Assorted Sizes, 12)		
Demilitarization Protective Ensemble Support Area Locker Rooms (continued):		
• Undershirt and Shirts (Assorted Sizes, 12 sets)		
• Cotton Demilitarization Protective Ensemble Undergarments (12)		
Chemical Agent Antidote Kits:	W	Kit in place and properly stocked.
• Unpack Area (1)		
• Second Floor Observation Hall (1)		
• Demilitarization Protective Ensemble Support Area Main Room (1)		
• Toxic Maintenance Area (1)		
• First Floor Observation Hall (1)		
EMERGENCY EQUIPMENT STORAGE STATIONS (PERSONNEL AND MAINTENANCE BUILDING AND MUNITIONS DEMILITARIZATION BUILDING) (continued)		
Chemical Agent Antidote Kits (continued):		
• Emergency Equipment Area (1)		

Item	Frequency[a]	Types of Problems
• Control Room Entry (1)		

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
EMERGENCY EQUIPMENT STORAGE STATIONS (PERSONNEL AND MAINTENANCE BUILDING AND MUNITIONS DEMILITARIZATION BUILDING) (continued)		
Stretchers:	W	In place and in good condition.
• Unpack Area (1)		
• Emergency Equipment Area (1)		
• Demilitarization Protective Ensemble Support Area (1)		
• Control Room Entry (1)		
• Mechanical Equipment Room (1)		
Demilitarization Protective Ensemble Support Area Butyl Rubber Storage:	W	Sufficient inventory for each item listed and expiration dates have not lapsed (where applicable).
• Butyl Suit, Toxicological Agent Protective (12)		
• Butyl Hood, Toxicological Agent Protective (12)		
• Butyl Gloves, Toxicological Agent Protective (12 pair)		
• Butyl Overboots, Toxicological Agent Protective (12 pair)		
• Butyl Safety Toe Boots, Toxicological Agent Protective (12 pair)		
• Butyl Apron, Toxicological Agent Protective Undergarments (12 sets)		

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
EMERGENCY EQUIPMENT STORAGE STATIONS (PERSONNEL AND MAINTENANCE BUILDING AND MUNITIONS DEMILITARIZATION BUILDING) (continued)		
Demilitarization Protective Ensemble Support Area Butyl Rubber Storage (continued):		
• Chemical Protective Liners, Impregnated, with Socks (12)		
• Mask, Chemical Agent (12)		
SPILL CONTROL VEHICLE	W	Parked at proper location; started and runs properly; gas tank more than one-half full; decontamination solution; has sufficient inventory of items listed.
Shovels (5)		
Picks (5)		
3-gallon Buckets (3)		
Rakes (5)		
Absorbent Pads/Bales Bags, Rags, etc.		
Duct Tape (12 Rolls)		
SPILL CONTROL VEHICLE (continued)		
Plastic Bags (6 Boxes)		
55-Gallon Drums (5)		
Hammer (1)		
Screwdriver (1)		
Socket Wrench Set (1)		
Brushes, with Handle (5)		

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
SPILL CONTROL VEHICLE (continued)		
Brooms (5)		
POWER-DRIVEN DECONTAMINATION APPARATUS	W	Parked at proper location; starts and runs properly; gas tank more than one-half full; decontaminant properly stored.
MUNITIONS DEMILITARIZATION BUILDING VENTILATION		
General Ventilation System	D	Visually inspect for evidence of corrosion, malfunctions, leaks, or excessive wear.
Pressure Gauges	D	Check for pressure drop.
Air Flow	D	Check that monitor is reading in appropriate range.
MUNITIONS DEMILITARIZATION BUILDING VENTILATION (continued)		
Internal Mechanical	When filters are changed	Visually inspect for evidence of corrosion, excessive wear; inspect for loss of lubrication and bearing overheating.
Monitor	D	Visually inspect for evidence of corrosion, and physical integrity.
Monitor Calibration	W	Check for correct calibration.
Carbon Filter System	D	Chemical agent breakthrough as indicated by monitors; replace with fresh carbon as needed.
LABORATORY VENTILATION SYSTEM		
General Ventilation System	D	Visually inspect for evidence of corrosion, malfunctions, leaks, or excessive wear.
Pressure Gauges	D	Check for pressure drop.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
LABORATORY VENTILATION SYSTEM (continued)		
Air Flow	D	Check that monitor is reading in appropriate range.
Internal Mechanical	When filters are changed	Visually inspect for evidence of corrosion, excessive wear; inspect for loss of lubrication and bearing overheating.
Monitor	D	Visually inspect for evidence of corrosion and physical integrity.
Monitor Calibration	W	Check for correct calibration.
BRINE FEED PUMPS		
Brine Feed Pumps	D	Visually inspect glands and connections for evidence of leakage; with pump operating, check for excessive noise and vibration.
Brine Reduction Area Strainers	D (During operation)	Visually inspect differential pressure gauge to see if differential pressure is greater than manufacturer's recommended value.
BRINE REDUCTION AREA DRUM DRYERS: BRA-DDYR-101, BRA-DDYR-102, AND BRA-DDYR-201		
Overfill/Spill Control Equipment	D	Visually inspect for evidence of corrosion, leakage, or other physical damage.
Level Switches and Transmitters	D	Check transmitters for proper operation.
Drum Dryer Housing	D	Visually inspect for evidence of corrosion, erosion, and leaking seams or fixtures.
Drum Dryer Area	D	Visually inspect for evidence of corrosion leakage on floor.
Piping and Valves	D	Visually inspect for evidence of corrosion and leakage.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
BRINE REDUCTION AREA DRUM DRYERS: BRA-DDYR-101, BRA-DDYR-102, AND BRA-DDYR-201 (continued)		
Skid Supports	D	Visually inspect for evidence of corrosion.
Drum Dryer Conditions	D	Inspect for corrosion, cracks, wear, or other damage.
Drum Dryer Drip Oil Feeders	D	Check operation, oil level, drip rate, and cleanliness; check that all lines are receiving oil.
Drum Dryer Knife Blades	D (Prior to startup)	Visually inspect for appearance of a heel.
Endscrapers	D	Check that endscrapers are keeping drum ends clean.
Endboards	D	Check condition, damage.
Conveyors	D (During operation)	Check condition of wiper blades for conveyors; check that conveyor belts are free of brine salt buildup.
Drum Dryer Catch Pans	D (During operation and always as part of shutdown)	Visually inspect for accumulated liquids and condition of pans.
BRINE REDUCTION AREA EVAPORATOR PACKAGES: BRA-EVAP-101, BRA-EVAP-102, BRA-EVAP-201, BRA-EXCH-101, BRA-EXCH-102, AND BRA-EXCH-201		
Overfill/Spill Control Equipment	D	Visually inspect for evidence of corrosion, leakage, or other physical damage.
Level Switches and Transmitters	D	Check transmitters for proper operation.
Evaporator/Heat Exchanger Structure	D	Visually inspect for evidence of corrosion, erosion, and leaking seams or fixtures.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
BRINE REDUCTION AREA EVAPORATOR PACKAGES: BRA-EVAP-101, BRA-EVAP-102, BRA-EVAP-201, BRA-EXCH-101, BRA-EXCH-102, AND BRA-EXCH-201 (continued)		
Evaporator/Heat Exchanger	D	Visually inspect for evidence of corrosion, erosion, and leaking seams or fixtures.
Piping and Valves	D	Visually inspect for evidence of corrosion and leakage.
Circulation Pumps and Desuperheater Pumps	D	Visually inspect glands and connections for evidence of leakage; with pump operating, check for excessive noise and vibration.
Skid Supports	D	Visually inspect for evidence of corrosion.
Evaporator/Heat Exchanger Conditions	A	Conduct nondestructive testing to detect corrosion, erosion, cracks, leaks, pitting, or wall thinning to less than sufficient shell strength.
BRINE REDUCTION AREA DRUM DRYERS AND BRINE EVAPORATOR PACKAGES (BRA-DRYR-101, BRA-DRYR-102, BRA-DRYR-201, BRA-EVAP-101, BRA-EVAP-102, BRA-EVAP-201,BRA-EXCH-101, BRA-EXCH-102, AND BRA-EXCH-201) SECONDARY CONTAINMENT SYSTEM)		
General Area	D	Inspect the floor and curbing for cracks, flaking, chips, or gouges, and areas that indicate excessive wear or deterioration of protective coating. Also examine floor and sump area for apparent drips, spills, or leaks.
Sump System		
• Sump Structure	D	Visually inspect construction materials for evidence of corrosion, erosion, leaking seams or fixtures, or deterioration of coating.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
BRINE REDUCTION AREA DRUM DRYERS AND BRINE EVAPORATOR PACKAGES (BRA-DRYR-101, BRA-DRYR-102, BRA-DRYR-201, BRA-EVAP-101, BRA-EVAP-102, BRA-EVAP-201,BRA-EXCH-101, BRA-EXCH-102, AND BRA-EXCH-201) SECONDARY CONTAINMENT SYSTEM (continued)		
• Sump Conditions	A	Remove metal sump for visual inspection of concrete liner.
• Piping and Valves	D	Visually inspect for evidence of corrosion and leakage.
• Sump Pump	D	Visually inspect glands and connections for evidence of leakage. With pump operating, check for excessive noise and vibration.
• Level Switches and Transmitters	D	Check transmitters for proper operation of control panel.
BRINE TRANSFER LINE		
Piping and Associated Equipment	D	Visually inspect for evidence of corrosion, leakage, or other physical damage.
Pipe Supports	D	Visually inspect for evidence of corrosion, leakage, or other physical damage.
Pipe Area	D	Visually inspect for evidence of leakage.
LOADING/UNLOADING AREAS		
Container Handling Building	D	Visually inspect for leaks, spills, and fugitive emissions.
Unpack Area Conveyors	D	Visually[f] inspect conveyors for physical integrity and slippage of belts or gears.
Deactivation Furnace System Ash Bin	D	Visually inspect for leaks, spills, and fugitive emissions.
Dunnage Incinerator Ash Bin	D	Visually inspect for leaks, spills, and fugitive emissions.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
LOADING/UNLOADING AREAS (continued)		
Deactivation Furnace System Cyclone Ash Bin	D	Visually inspect for leaks, spills, and fugitive emissions.
Dunnage Incinerator Baghouse Ash Bin	D	Visually inspect for leaks, spills, and fugitive emissions.
Brine Salt Loading Areas-- Brine Reduction Area	D	Visually inspect for leaks, spills, and fugitive emissions.
DEMISTERS		
Nozzles	D	Visually inspect pressure gauge in water lines supplying the nozzles (pressure must be >30 pounds per square inch gauge and <120 pounds per square inch gauge).
CHEMICAL AGENT MONITORS		
Chemical Agent Monitors	D	Visually inspect monitors for physical integrity. Check diagnostic indicators on front panel of monitor housing for proper operation. Perform agent challenge test and calibration.
Automatic Continuous Air Monitoring System (Area Monitoring):		
• Quick Disconnect	D	Visually inspect if present. (Not required in Level C areas.)
• Sample Line	D	Visually inspect if connected to sample port; inspect if heat trace is functional.
• Unused Sample Lines	D	Visually inspect if capped.
• Sampling Pump Exhaust	D	Inspect for proper ventilation.
• Chart Recorder	D	Inspect for range set at 10 volts and in record mode.
• Power Supply	D	Inspect to ensure supply meets or exceeds monitoring plan.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
CHEMICAL AGENT MONITORS (continued)		
Automatic Continuous Air Monitoring System (Area Monitoring) (continued):		
• Sample Flow	D	Inspect set point to ensure ±20 percent of the manufacturer's recommended set point.
Depot Area Air Monitoring System (Perimeter Monitoring/Ambient Air System Monitoring):		
• Tubes	D	Visually inspect if present.
• Quick Disconnect	D	Visually inspect if present.
• Sample Line	D	Visually check if connected to sampling port; inspect if heat trace is functional.
• Unused Sample Lines	D	Visually check if lines are capped.
• Sampling Pump Exhaust	D	Inspect for proper ventilation.
• Power Supply	D	Inspect to ensure supply meets or exceeds monitoring plan.
METEOROLOGICAL STATIONS		
Meteorological Stations	D	Visually inspect station for physical integrity; check diagnostic indicators on front panel at each monitor for proper operation.
UNINTERRUPTIBLE POWER SUPPLY		
Invertor Input Voltage	W	Check meter for proper voltage.
Invertor Input Current	W	Check meter for proper current.
Battery Current	W	Check meter for proper reading.
Alternating Current Voltage	W	Check meter for proper voltage.
Frequency	W	Check meter for proper frequency.
Uninterruptible Power Supply Output Current	W	Check meter for proper current.
Primary Input Current	W	Check meter for proper current.
Primary Input Voltage	W	Check meter for proper voltage.

Table F-2-1 (continued)
INSPECTION SCHEDULE

Item	Frequency[a]	Types of Problems
MUNITIONS DEMILITARIZATION BUILDING PROCESS SUMPS		
Overfill/Spill Control Equipment	D	Visually[b,d] inspect for evidence of corrosion, leakage, or other physical damage.
Level Switches and Transmitters	D	Check transmitters for proper operation at control panel.
Sump Structure	D	Visually[b,d] inspect construction materials for evidence of corrosion, erosion, and leaking seams or fixtures.
Sump Area	D	Visually[b,d] inspect for evidence of leakage.
Piping and Valves	D	Visually[b,d] inspect for evidence of corrosion and leakage.
Sump Pump	D	Visually[b,d] inspect glands and connections for evidence of leakage; with pump operating, check for excessive noise and vibration.
Secondary Containment System	D	Visually[b,d] inspect for presence of liquid or evidence of cracks or other physical damage.
Sump Conditions	A	Remove metal sump for visual inspection of concrete liner.

NOTES:

[a] D-daily; W-weekly; M-monthly; S-semiannually; A-annually.

[b] Normal visual observation by operators will be conducted by remote closed circuit television camera(s) located in the incinerator area. Cameras will be equipped with pan/tilt, zoom, and wide-angle features to allow thorough viewing of the area within the field of vision. Visual inspections will be conducted at least once per operating week when personnel enter the area for routine operation and maintenance activities.

[c] In-place testing of the carbon filters will be performed at a minimum of once every 18 months. In addition, leak testing will be performed when initially installed and after a replacement of any carbon filter. When testing after filter replacement, only those banks of carbon filters that received the new filter will be tested.

[d] Normal, visual observation by operators will be conducted by remote closed circuit television cameras that will be located in the Toxic Cubicle. Cameras will be equipped with pan/tilt, zoom, and wide-angle features to allow thorough viewing of the area within the field of vision. Visual inspections will be conducted at least once per operating week when personnel enter the area for routine operation and maintenance activities.

[e] Normal visual observation by operators will be conducted by remote closed circuit television cameras located in the Spent Decontamination System Room. Cameras are equipped with pan/tilt, zoom, and wide-angle features allow thorough viewing of the area within the field of vision. Visual inspections are conducted at least once per operating week when personnel enter the area for routine operation and maintenance activities.

[f] Normal visual observation will be conducted by remote closed circuit television cameras that will be located in the Unpack Area. Cameras will be equipped with pan/tilt, zoom, and wide-angle features to allow thorough viewing of the area within the field of vision. Visual inspections will be conducted at least once per operating week when personnel enter the area for routine operation and maintenance activities.

Table F-2-2
EQUIPMENT REGULATED UNDER 40 CFR SUBPART BB

Hazardous Waste Management Unit (P&ID number)	Location at UMCDF	Type of Equipment	Equipment Identification Number	Percent by Weight Total Organics[a]	Hazardous Waste State	Method of Compliance[b]
Transfers liquid chemical agent from ACS-TANK-103 to agent holding tank or agent surge tank (UM-1-D-501)	Explosive Containment Room in the MDB	Pump	ACS-PUMP-109	>10	Heavy liquid	ACAMS and visual inspection by closed circuit television
	same	Control valves	XV-53	>10	Heavy liquid	same
	same	Ball valves (4)	V-6, V-7, V-8, V-9	>10	Heavy liquid	same
	same	Hose connection assembly (2)	SP-130(2)	>10	Heavy liquid	same
	same	Flexible hose assembly (2)	SP-159(2)	>10	Heavy liquid	same
	Munitions Corridor in the MDB	Control valve	XV-43	>10	Heavy liquid	same
Transfers liquid chemical agent from ACS-TANK-104 to agent holding tank or agent surge tank (UM-1-D-502)	Room 03-211 of the Explosive Containment Room in the MDB	Pump	ACS-PUMP-108	>10	Heavy liquid	ACAMS and visual inspection by closed circuit television
	same	Control valve	XV-59	>10	Heavy liquid	same
	same	Ball valves (4)	V-16, V-17, V-18, V-19	>10	Heavy liquid	same
	same	Hose connection assembly (2)	SP-130(2), SP-159(2)	>10	Heavy liquid	same

Table F-2-2
EQUIPMENT REGULATED UNDER 40 CFR SUBPART BB

Hazardous Waste Management Unit (P&ID number)	Location at UMCDF	Type of Equipment	Equipment Identification Number	Percent by Weight Total Organics[a]	Hazardous Waste State	Method of Compliance[b]
	same	Flexible hose assembly (2)	SP-159(2)	>10	Heavy liquid	same
	Munitions Corridor in the MDB	Control valve	XV-46	>10	Heavy liquid	same
Transfers liquid chemical agent from the Bulk Drain Stations to the agent holding tank (UM-1-D-514)	Munitions Processing Bay of the MDB	Check valves (3)	V-24, V-25, V-24 after pump	>10	Heavy liquid	ACAMS and visual inspection by closed circuit television
	same	Ball valves (3)	V-21, V-22, V-23	>10	Heavy liquid	same
	same	Control valves (3)	HV-123, HV-124, FV-20	>10	Heavy liquid	same
	same	Hose connection assembly (2)	SP-130(2)	>10	Heavy liquid	same
	same	Flexible hose assembly (2)	SP-159(2)	>10	Heavy liquid	same
	same	Pump	ACS-PUMP-115	>10	Heavy liquid	same
	same	Instrumentation connections (seals)	PIT-39, PSLL-19, PSL-19, PDIT-67, PSH-20	>10	Heavy liquid	same
(UM-1-D-515)	Munitions Processing Bay of the MDB	Check valves (3)	V-27, V-28, V-44	>10	Heavy liquid	ACAMS and visual inspection by closed circuit television
	same	Control valves (3)	HV-127, HV-128, FV-120	>10	Heavy liquid	same

Table F-2-2
EQUIPMENT REGULATED UNDER 40 CFR SUBPART BB

Hazardous Waste Management Unit (P&ID number)	Location at UMCDF	Type of Equipment	Equipment Identification Number	Percent by Weight Total Organics[a]	Hazardous Waste State	Method of Compliance[b]
	same	Hose connection assembly (2)	SP-130(2)	>10	Heavy liquid	same
	same	Flexible hose assembly (2)	SP-159(2)	>10	Heavy liquid	same
	same	Ball valves (2)	V-26, V-102	>10	Heavy liquid	same
	same	Instrumentation connections (seals)	PIT-58, PSLL-14, PSL-14, PDIT-66, PSH-120	>10	Heavy liquid	same
(UM-1-D-521)	same	Pump	ACS-PUMP-114	>10	Heavy liquid	same
Transfer liquid chemical agent from ACS-TANK-105 to agent holding tank or agent surge tank (UM-1-D-521)	Munitions Processing Bay of the MDB	Ball valves (4)	V-54, V-55, V-56, V-57	>10	Heavy liquid	ACAMS and visual inspection by closed circuit television
	same	Ball valves (3)	V-41, V-42, V-43	>10	Heavy liquid	same
	same	Check valve	V-59	>10	Heavy liquid	same
	same	Control valve	XV-75	>10	Heavy liquid	same
	same	Hose connections (2)	SP-130(2)	>10	Heavy liquid	same
	same	Flexible hose assembly (2)	SP-159(2)	>10	Heavy liquid	same
	same	Pump	ACS-PUMP-111	>10	Heavy liquid	same

Table F-2-2
EQUIPMENT REGULATED UNDER 40 CFR SUBPART BB

Hazardous Waste Management Unit (P&ID number)	Location at UMCDF	Type of Equipment	Equipment Identification Number	Percent by Weight Total Organics[a]	Hazardous Waste State	Method of Compliance[b]
Transfers liquid chemical agent from ACS-TANK-106 to agent holding tank or agent surge tank (UM-1-D-521)	Munitions Processing Bay of the MDB	Ball valves (4)	V-74, V-75, V-76, V-77	>10	Heavy liquid	ACAMS and visual inspection by closed circuit television
	same	Check valve	V-79	>10	Heavy liquid	same
	same	Control valve	XV-85	>10	Heavy liquid	same
	same	Hose connection asssembly (2)	SP-130(2)	>10	Heavy liquid	same
	same	Flexible hose assembly (2)	SP-159(2)	>10	Heavy liquid	same
	same	Pump	ACS-PUMP-112	>10	Heavy liquid	same
Transfers liquid chemical agent from ACS-TANK-107 to agent holding tank or agent surge tank (UM-1-D-521)	Munition Processing Bay of the MDB	Ball valves (4)	V-94, V-95, V-96, V-97	>10	Heavy liquid	ACAMS and visual inspection by closed circuit television
	same	Check valve	V-99	>10	Heavy liquid	same
	same	Control valve	XV-95	>10	Heavy liquid	same
	same	Hose connection assembly (2)	SP-130(2)	>10	Heavy liquid	same

Table F-2-2
EQUIPMENT REGULATED UNDER 40 CFR SUBPART BB

Hazardous Waste Management Unit (P&ID number)	Location at UMCDF	Type of Equipment	Equipment Identification Number	Percent by Weight Total Organics[a]	Hazardous Waste State	Method of Compliance[b]
	same	Flexible hose assembly (2)	SP-159(2)	>10	Heavy liquid	same
	same	Pump	ACS-PUMP-113	>10	Heavy liquid	same
Transfers liquid chemical agent from ACS-TANK-103, ACS-TANK-104, ACS-TANK-105, ACS-TANK-106, and ACS-TANK-107 to the agent holding tank or agent surge tank (UM-1-D-536)	Toxic Cubicle of the MDB	Ball valves (2)	V-78, V-98	>10	Heavy liquid	ACAMS and visual inspection by closed circuit television
	same	Check valves (4)	V-76, V-96, V-77, V-97	>10	Heavy liquid	same
	same	Control valves (6)	SP-143(2), LV-84, LV-86, SP-142(2)	>10	Heavy liquid	same
Equipment on agent holding tank, ACS-TANK-101 (UM-1-D-536)	Toxic Cubicle of the MDB	Ball valves (3)	V-87, V-85, V-86 (blind)	>10	Heavy liquid	ACAMS and visual inspection by closed circuit television
	same	Pressure safety valve	PSV-161	>10	Vapor	same
	same	Rupture disc	PSE-162	>10	Vapor	same
	same	Instrumentation connections (seals)	LIT-93	>10	Heavy liquid	same

Table F-2-2
EQUIPMENT REGULATED UNDER 40 CFR SUBPART BB

Hazardous Waste Management Unit (P&ID number)	Location at UMCDF	Type of Equipment	Equipment Identification Number	Percent by Weight Total Organics[a]	Hazardous Waste State	Method of Compliance[b]
Equipment on agent surge tank, ACS-TANK-102 (UM-1-D-536)	Toxic Cubicle of the MDB	Ball valves (3)	V-107, V-105, V-106 (blind)	>10	Heavy liquid	ACAMS and visual inspection by closed circuit television
	same	Pressure safety valve	PSV-160	>10	Vapor	same
	same	Rupture disc	PSE-159	>10	Vapor	same
	same	Instrumentation connections (seals)	LIT-109	>10	Heavy liquid	same
Transfers chemical agent vapor from agent holding tank and agent surge tank to canister-type carbon filter (UM-1-D-536)	Toxic Cubicle of the MDB	Blinded gate valves (2)	V-121, V-123	>10	Vapor	ACAMS and visual inspection by closed circuit television
	same	Control valve	HV-775	>10	Vapor	same
	same	Carbon filter	SP-218	>10	Vapor	same

Table F-2-2
EQUIPMENT REGULATED UNDER 40 CFR SUBPART BB

Hazardous Waste Management Unit (P&ID number)	Location at UMCDF	Type of Equipment	Equipment Identification Number	Percent by Weight Total Organics[a]	Hazardous Waste State	Method of Compliance[b]
Transfers liquid chemical agent from agent holding tank or agent surge tank to Liquid Incinerators (UM-1-D-536)	Toxic Cubicle of the MDB	Ball valves (26)	V-81, V-84, V-79, V-82, V-83, V-80, V-101, V-104, V-99, V-102, V-103, V-100, V-95, V-94, V-88, V-89, V-119, V-120, V-117, V-116, V-70, V-108, V-118, V-109, V-114, V-113	>10	Heavy liquid	ACAMS and visual inspection by closed circuit television
	same	Check valves (5)	V-93, V-90, V-115, V-110, V-112	>10	Heavy liquid	same
	same	Plug valves (2)	V-125, V-127	>10	Heavy liquid	same
	same	Control valves (4)	LV-97, LV-105, XV-737, XV-736	>10	Heavy liquid	same
	same	Hose connection assembly (2)	SP-130(2)	>10	Heavy liquid	same
	same	Pressure safety valves (5)	PSV-738, PCV-735, PSV-103, PSV-102, PCV-43	>10	Heavy liquid	same
	same	Pumps (3)	ACS-PUMP-201, ACS-PUMP-102, ACS-PUMP-101	>10	Heavy liquid	same

Table F-2-2
EQUIPMENT REGULATED UNDER 40 CFR SUBPART BB

Hazardous Waste Management Unit (P&ID number)	Location at UMCDF	Type of Equipment	Equipment Identification Number	Percent by Weight Total Organics[a]	Hazardous Waste State	Method of Compliance[b]
	same	Sampling connection system	ACS-AASS-101	>10	Heavy liquid	same
	same	Instrumentation connections (seals)	PDIT-99, PDIT-104, PI-739, PI-101, PI-742, PI-43, PI-118	>10	Heavy liquid	same
(UM-1-D-546)	Liquid Incinerator Room	Ball valves (5)	V-70, V-71, V-73, V-74, V-72	>10	Heavy liquid	ACAMS and visual inspection by closed circuit television
	same	Control valves (4)	FV-731, XV-761A, XV-761B, XV-204	>10	Heavy liquid	same
	same	Flexible hose	Has no equipment number (see UM-1-D-546)	>10	Heavy liquid	same
	same	Instrumentation connections (seals)	PIT-732, PSLLL-733, PI-760, PSLL-760	>10	Heavy liquid	same
(UM-1-D-526)	Liquid Incinerator Room	Ball valves (5)	V-20, V-21, V-22, V-23, V-24	>10	Heavy liquid	ACAMS and visual inspection by closed circuit television
	same	Control valves (3)	FV-127, XV-134A, XV-134B	>10	Heavy liquid	same

Table F-2-2
EQUIPMENT REGULATED UNDER 40 CFR SUBPART BB

Hazardous Waste Management Unit (P&ID number)	Location at UMCDF	Type of Equipment	Equipment Identification Number	Percent by Weight Total Organics[a]	Hazardous Waste State	Method of Compliance[b]
	same	Flexible hose	Has no equipment number (see UM-1-D-526)	>10	Heavy liquid	same
	same	Instumentation connections (seals)	PIT-119, PSLL-112, PI-112, PSLL-112	>10	Heavy liquid	same

NOTES:
[a] Specific composition and percentages of the organics comprising the chemical agents GB, VX, and mustard wastes are provided in Table C-1-9 thru C-1-11 of this permit application.
[b] Automatic Continuous Air Monitoring System will provide continuous monitoring.
ACAMS = Automatic Continuous Air Monitoring System
MDB = Munitions Demilitarization Building
P&ID = Piping & Instrumentation Diagram

ATTACHMENT 4

CONTINGENCY PROCEDURES FOR MUNITION DRAINAGE

Contingency Procedure Steps to Process Ton Containers with >5% Heel

1. Configure the Primary Chamber burners as follows:
   a. One burner firing in each zones 1,2, and 3.
   b. Temperature setpoint for each zones 1,2, and 3 will be between 900 °F and 1000 °F.
   c. The combustion air valves to the remaining primary chamber burners will be closed.

2. Operate the afterburner in accordance with the normal operating conditions specified in the SOP (2000 °F +/- 150 °F).

3. Put the zone 2 water quench flow control valves in manual with a CV of 0.

4. Put the zone 3 conveyor in manual.

5. Manually transfer the ton container tray assembly from the charge airlock into zone 2.

6. Place the zone 2 conveyor in the oscillate mode.

7. If the temperature in zone 2 increases to 1400 °F, open the upper water flow control valves. If the temperature increases to 1450 °F, open the lower water flow control valves.

NOTE: The purpose of this is to ensure the vaporization rate does not become excessive.

8. Continue to modulate the zone 2 water quench flow control valves until the zone 2 temperature cools to 1100 °F, then close the water flow control valves.

9. When the zone 2 temperature stabilizes at 1100 °F +/- 100 °F, with the water flow control valves closed, and the oxygen concentration in the crossover duct is at least 12%, wait 90 minutes.

NOTE: If during this procedure, a burner(s) in the primary chamber should lose flame and lockout, the purge for relight can be bypassed as long as one of the burners in the primary chamber remains lit. See step 18 for further specifics.

10. Relight the furnace IAW-normal processing. Specifically, three burners lit in zone 1, two burners in zone 2, and two burners lit in zone 3.

11. Open the combustion air valves to the unlit primary chamber burners. Specifically, one burner in zone 1, and two burners in zone 2.

12. Ramp the temperature in the primary chamber zones to 1450 °F +/-150 °F.

13. Place the zone 2 water flow control valves in automatic.

14. Once the primary chamber reaches 1450 °F +/-150 °F, wait 50 minutes.

15. Transfer the ton container assembly into zone 3, oscillate and sparge the ton containers for 40 minutes.

16. Transfer the ton container assembly into the discharge airlock.

17. Observe the ACAMS (minimum of two cycles) monitor readings for chemical agent, pull a DAAMS sample and have the lab analyze. If readings are unacceptable, transfer the ton container back into zone 3 for additional heat treatment as per the existing MPF procedures.

18. The post purge, pre-purge, and the flame scanner interlock requirements will be waived for relighting a fuel oil burner provided that at least one flame scanner in an adjoining zone remains energized i.e. (sees the flame) and the temperature of the affected zone remains above 900 °F