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Utah Court of Appeals

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IN THE UTAH COURT OF APPEALS

SIERRA CLUB, CHEMICAL WEAPONS WORKING GROUP, AND VIETNAM VETERANS OF AMERICA FOUNDATION, Petitioners, v. UTAH SOLID AND HAZARDOUS WASTE CONTROL BOARD, Respondent, and UNITED STATES ARMY AND EG&G DEFENSE MATERIALS, INC. Intervenors and Respondents	UTAH COURT OF APPEALS BRIEF UTAH DOCUMENT KFU 50 .A10 DOCKET NO. 970313-CA Case No. 970313-CA Argument priority: 14

BRIEF OF RESPONDENT
UTAH SOLID AND HAZARDOUS WASTE CONTROL BOARD

On Petition For Review of Decision
of the Utah Solid And Hazardous Waste Control Board

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FILED

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COURT OF APPEALS

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<u>**PARTIES**</u>

The Parties before the Utah Solid and Hazardous Waste Control Board were Petitioners Sierra Club, Chemical Weapons Working Group, and Vietnam Veterans of America Foundation, who were Intervenors below; Respondent United States Army; Respondent EG&G Defense Materials, Inc.; and Respondent Executive Secretary of the Utah Solid and Hazardous Waste Control Board. The Solid and Hazardous Waste Control Board heard and decided the Petitioners' First and Second Requests for Agency Action; the Board was not a party to the adjudication.

Counsel for the Petitioners and for the Utah Solid and Hazardous Waste Control Board are listed on the cover page. The additional parties are represented as follows:

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I. JURISDICTION

This Court has jurisdiction over requests for judicial review of hazardous waste permitting decisions pursuant to Utah Code Ann. §§ 63-46b-1(1)(b), 63-46b-1(2)(k), 63-46b-16(1) (1997), and 78-2a-3(2)(a) (1996).

II. ISSUES PRESENTED FOR REVIEW

A. Have Petitioners provided sufficient evidence to demonstrate they have standing to bring this action?

Standard of Review: Because the Solid and Hazardous Waste Control Board (Board) made no determination regarding standing, there is no decision to review. However, because this is a question of law and impacts jurisdiction, it may be decided in the first instance by this Court. See Sierra Club v. Department of Envtl. Quality, 857 P.2d 982 (Utah App. 1993).

B. Did the Board abuse its discretion when it refused to revoke a hazardous waste permit or deny a permit modification for alleged failure to comply with the terms of the permit, or applicable rules and statutory requirements? This issue applies to Petitioners' argument that the Tooele Chemical Agent Demilitarization Facility (TOCDF) permit should be revoked and necessary permit modifications denied due to various operational failures alleged by Petitioners, which Petitioners consider to be violations of the permit, and applicable rules and statutes. The issue also applies to Petitioners' argument that EG&G Defense Materials, Inc. (EG&G) should be denied a permit because it operated without a permit for a long period.

Standard of review: The legislature has explicitly granted discretion to the Board to determine when to take action to revoke a permit for failure to comply with the terms of that permit. Utah Code Ann. § 19-6-108(12) (1995 and Supp. 1997). The Board also has broad statutory authority to make rules outlining the terms and conditions for permit approval, disapproval, and revocation. Utah Code Ann. § 19-6-105(1)(e) (1995). Among the rules it has made is Utah Admin. Code R315-3-10(a) (1997), which establishes a duty to comply with permit requirements and states that violation "is *grounds for* enforcement action; for plan approval termination, revocation and reissuance, or modification; or for denial of a plan approval renewal application." Id. (emphasis added). Again, the language is discretionary.

The legislature has given the Board broad discretion to determine what kinds of violations are worthy of an action against the permit or permit application. This degree of discretion is appropriate for a power that is essentially prosecutorial in nature, and the abuse of discretion standard should therefore apply. Utah Code Ann. § 63-46b-16(4)(h)(i) (1997); Tasters Ltd., Inc. v. Department of Employment Security, 863 P.2d 12, 18 (Utah App. 1993).[1]

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[1] The abuse of discretion standard outlined in Tasters should survive the standard of review changes made in Drake v. Industrial Comm'n of Utah, 939 P.2d 177, 181, n. 6 (Utah 1997) because this determination involves the use of enforcement authority with a range of allowable outcomes. It does not simply involve applying the law to a set of facts to get a correct result. However, even if Drake governs, it is appropriate for this Court to grant a large amount of "operational discretion" to the agency given the degree of discretion granted by the legislature, and given the prosecutorial nature of the decision being made. See discussion in Section II.C, supra.

C. Did the Board have sufficient evidence to support its conclusion that operation of the Tooele Chemical Agent Demilitarization Facility will not pose a threat to human health or the environment, as required by the Utah Solid and Hazardous Waste Act, Utah Code Ann. § 19-6-108(9)(b) (1995 and Supp. 1997), and Utah Admin. Code R315-3-20(b)(5)(ii) (1997), and that releases from the facility will be minimized as required by Utah Admin. Code R315-8-3.2 (1997).

Standard of Review: This is a question that requires the application of a legal standard to a set of facts. The Board's Findings of Fact should be accepted as conclusive given Petitioners' failure to marshal the evidence. Crapo v. Industrial Comm'n of Utah, 922 P.2d 39 (Utah App. 1996). If the findings of fact are not accepted as conclusive for this reason, they will be upheld if they are supported by substantial evidence. Drake v. Industrial Commission of Utah, 939 P.2d 177, 181 (Utah 1997) (quoting State v. Pena, 869 P.2d 932, 936 (Utah 1994)).

The application of law to facts is subject to a correction of error standard as a question of law. Id. Nevertheless, the reviewing court may grant some "operational discretion" to the agency and, depending on the amount of discretion granted, will review the agency's decision using a correctness standard, an abuse of discretion standard, or a standard between those extremes. Id.

This case involves complex hazardous waste permitting decisions over which the legislature has granted the Board broad discretion. Utah Code Ann. §§ 19-6-104(1)(f), 19-6-104(1)(k), 19-6-105(1)(a), and 19-6-105(1)(e) (1995 and Supp. 1997). Members of the Board are required to "be knowledgeable about solid and hazardous waste matters." Utah

Code Ann. § 19-6-103(2) (1995 and Supp. 1997). Several of the members must be from positions that would give them particular expertise. Utah Code Ann. § 19-6-103(1) and (2)(c), (d), and (f) through (h) (1995 and Supp. 1997). For these reasons, it is appropriate in this case for the Court to grant substantial operational discretion to the Board, and therefore to review the Board's decision with considerable deference.

D. Did the Board afford Petitioners a reasonable opportunity to present their case, in compliance with constitutional due process requirements and Utah Code Ann. § 63-46b-8 (1997)?

Standard of Review: A reviewing court will grant relief only if Petitioners demonstrate that agency failed to follow prescribed procedures and they were "substantially prejudiced" by that failure. Utah Code Ann. § 63-46b-16(4) (1997); D.B. v. Division of Occupational and Prof'l Licensing, 779 P.2d 1145, 1147 (Utah App. 1989).

III. DETERMINATIVE LAW

Determinative law is set forth in Addendum A.

IV. STATEMENT OF THE CASE

A. Nature of the Case and Proceedings Before the Solid and Hazardous Waste Control Board

The Solid and Hazardous Waste Control Board concurs with the characterization of the nature of the case and the proceedings below in the brief submitted by the Respondents U.S. Army and EG&G Defense Materials, Inc., with the following addition:

The permit and permit modifications challenged by Petitioners were issued by the Executive Secretary pursuant to the Utah Administrative Procedures Act (UAPA), Utah Code Ann. § 63-46b-1(2)(k) (1997), which allows the agency to issue initial notices of violation or orders without complying with the requirements of UAPA. The hearing conducted by the Board was a *de novo* hearing on the issues raised by Petitioners. The same UAPA provision mandates that UAPA govern the conduct of that hearing.

On April 17, 1997, the Board voted to uphold the Executive Secretary's permitting decisions. Petitioners filed a Petition for Review on May 21, 1997. The Board issued its written Order on July 22, 1997. The Board's Order (Index No. IR-173) is included as Addendum B to this brief.

B. Statement of Facts

The Solid and Hazardous Waste Control Board concurs with the statement of facts in the brief submitted by the Respondents U.S. Army and EG&G Defense Materials, Inc., with the following additions:

1. Utah's Hazardous Waste Program

The United States Congress, concerned over the potential for improper management of hazardous waste to injure human health and the environment, passed the Resource Conservation and Recovery Act (RCRA) in 1980. RCRA is codified under the Solid Waste Disposal Act, 42 U.S.C.A. § 6901 through 6992k (1994 and Supp. 1997). RCRA directs the United States Environmental Protection Agency (EPA) to oversee the management of hazardous waste throughout the nation and provides for delegation of the RCRA program to States that become authorized to administer it. Utah has been authorized by the EPA to administer the hazardous waste program in the State.

The Utah legislature enacted the Solid and Hazardous Waste Act (SHWA) in 1981 to provide a statutory and regulatory system for oversight of the treatment, storage, and disposal of hazardous waste. Utah Code Ann. § 19-6-101 through 19-6-123 (1995 and Supp. 1997) (formerly codified under different section numbers within Title 26). The SHWA implements the federal Resource Conservation and Recovery Act for the State of Utah. Utah Code Ann. § 19-6-104(1)(i) (1995 and Supp. 1997).

The legislature created the Utah Solid and Hazardous Waste Control Board to administer the SHWA, promulgate rules, and set policy within the limitations of the SHWA. The Board is made up of thirteen members: two representatives of municipal and county government; four members of the public, including a representative of organized environmental interests; a registered professional engineer; a representative of a local health department; four representatives of various industries whose activities are governed by the

SHWA; and the Executive Director of the Utah Department of Environmental Quality. Utah Code Ann. §§ 19-1-103 and 19-6-106 (1995).

The legislature delegated considerable authority to the Board to implement the SHWA. For example, the Board may: conduct inspections; hold hearings at which it may receive evidence it finds proper; issue orders, which it can enforce through administrative or judicial proceedings; settle or compromise compliance proceedings; require permit applicants to submit specifications and information; approve or disapprove permit applications and revoke or review permits. Utah Code Ann. § 19-6-104 (1995 and Supp. 1997). The SHWA uses the term "plan approval" rather than "permit," but these terms are equivalent and the term "permit" is used in this brief. Utah Admin. Code R315-1-1 (d) (1) (1997).

The legislature also created the office of Executive Secretary to the Board and allowed the Board to delegate to the Executive Secretary the authority to perform many of its functions under its administrative control. Utah Code Ann. § 19-6-107 (1995). The Executive Secretary is also the Director of the Utah Division of Solid and Hazardous Waste (Division). The Division staff does the day-to-day work of the Board and the Executive Secretary, such as writing permits, inspecting facilities, and overseeing compliance with the SHWA, administrative rules, and permits.

"Hazardous waste" is statutorily defined at Utah Code Ann. § 19-6-102 (9) (1995 and Supp. 1997). Utah Admin. Code R315-2-3 (1997) refines the statutory definition. In general, the Board has adopted EPA's definitions of hazardous waste, but it has added to its definition three wastes not regulated by EPA: the military chemical agents GB (nerve agent), VX (nerve agent) and Mustard (H, HD, HT). Utah Admin. Code R315-2-11 (e) (1)(1997).

V. SUMMARY OF ARGUMENTS

A. Petitioners' only evidence of standing in this case is unsupported allegations that members live and use property near TOCDF. They have not demonstrated that they have a personal stake in the outcome of this dispute, or that they meet any of the other requirements for standing.

B. Petitioners did not marshal the evidence contrary to their positions, but instead presented a very one-sided version of the evidence adduced below. The Board's Findings of Fact regarding this matter should be accepted as conclusive given this failure to marshal the evidence.

C. The Board did not abuse its discretion when it determined that operation incidents did not warrant an enforcement action against the TOCDF facility to revoke its permit, or to deny it essential permit modifications. The Board also did not abuse its discretion when it determined that EG&G should be granted an operating permit notwithstanding Petitioners' claim that EG&G had been illegally operating TOCDF prior to being granted an operating permit.

D. The Board's Findings that the Division's screening risk assessment was properly performed and conservatively estimated risk should be accepted as conclusive given Petitioners' failure to marshal the evidence. The Findings should also be upheld by this Court because there is ample evidence to support them.

E. The transcript shows that the Board granted Petitioners substantial amounts of additional time beyond Petitioners' initial twelve hours and otherwise worked to accommodate

Petitioners' concerns without losing control of the proceeding. Petitioners' own strategic choices are responsible for any failure by Petitioners to present their case.

VI. ARGUMENT

A. Petitioners Have Failed to Demonstrate Standing.

Petitioners must demonstrate standing in order to bring an appeal before this Court. Their only attempt to do so is found in their two Requests for Agency Action, each of which contains general allegations that Sierra Club, Vietnam Veterans of America, and the Chemical Weapons Working Group have members living in and using areas that would be affected by the TOCDF facility. (Index No. IR-1, at 2-3, and Index No. IR-2 at 2-5; these documents are also included, without their attachments, as Addenda C and D to this brief.)

General allegations such as those found in Petitioners' Requests for Agency Action are not adequate to show standing. A complainant must meet one of three standards. It must show that it has "some distinct and palpable injury that gives [it] a personal stake in the outcome of the legal dispute." Jenkins v. Swan, 675 P.2d 1145, 1148 (Utah 1983); Terracor v. Board of State Lands and Forestry, 716 P.2d 796, 799 (Utah 1986) (citations omitted). A "general interest [it] shares in common with members of the public at large" is not adequate to show standing. Jenkins, 675 P.2d at 1148-49. A requirement implied by the "personal stake" requirement is that there must be a causal relationship between an injury alleged by a complainant and each action challenged. Sierra Club, 857 P.2d at 986 (Utah App. 1993) (challenge to emergency coordination). For example, in this case, Petitioners have challenged the Division's screening risk assessment for failure to include various exposure scenarios. In

order to establish a causal relationship, Petitioners must show that any such failure directly injures their members.[2] They must show, for example, that they have members whose risk is underestimated in the screening risk assessment. A general desire to shut down the plant in order to avoid other injury is not adequate to confer standing. Id.

If the complainant is unable to demonstrate such a personal stake, standing may still be granted to an organization if it can show "no one else has a greater interest in the outcome of the case and the issues are unlikely to be raised at all unless that particular plaintiff has standing to raise the issue," or that "the issues are unique and of such great public importance that they ought to be decided in furtherance of the public interest." Terracor, 716 P.2d at 799; see also Jenkins, 675 P.2d at 1148-50.

The Petitioners' standing was not considered by the Board below, although the Executive Secretary did warn the Board (and therefore the parties) in his Prehearing Brief that an appellate court would look to the record for evidence of judicial standing. (Index No. IR-138, at 13, n. 4.) Although the Board may have the authority to consider a challenge to a permit without considering whether the challenger has judicial standing, this Court will not adjudicate a case where the complainant has no standing. Sierra Club v. Department of Envtl. Quality, 857 P.2d 982 (Utah App. 1993). Given the evidence in this case that there is far greater risk from continued storage of chemical weapons than from their incineration (see

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[2] In addition to these requirements, an organization must demonstrate that it has standing by showing that "the individual members of the association have standing to sue" and that "the nature of the claim and of the relief sought does not make the individual participation of each injured party indispensable to the proper resolution of the cause." Society of Prof'l Journalists v. Bullock, 743 P.2d 1166, 1175 (Utah 1987) (citations omitted).

Board's Order, Index No. IR-173 and Addendum B at 6, Findings of Fact paragraph 17), it is particularly appropriate that Petitioners be required to show they have members supporting this petition for review who allege injury that is caused by the actions Petitioners challenge. Petitioners provided no such evidence below, and they cannot do so now.

B. The Board's Findings of Fact Should Be Accepted Due to Petitioners' Failure to Marshal the Evidence

In order to challenge findings of fact made by an administrative agency, a challenger must marshal all of the evidence supporting the findings and show that despite the supporting facts and in light of the conflicting evidence, the findings are not supported by substantial evidence. Beaver County v. Utah State Tax Comm'n and Union Pacific, 919 P.2d 547, 554 (Utah 1996); Grace Drilling v. Board of Review, 776 P.2d 63, 68 (Utah App. 1989). Findings will be accepted as conclusive if this burden is not met. Crapo v. Industrial Comm'n of Utah, 922 P.2d 39 (Utah App. 1996); Intermountain Health Care v. Board of Review of the Indus. Comm'n, 839 P.2d 841 (Utah App. 1992).

Petitioners in their Opening Brief failed to marshal any evidence in support of the Board's decision, but instead presented only an extremely one-sided version of the evidence. For example:

- Petitioners state that the health risk assessment prepared by the Division "irrefutably" shows that TOCDF creates a cancer risk above the Division's own standard for the breast feeding infant/child of a non-subsistence farmer (Petitioners' Opening Brief at 36), ignoring the evidence presented that the screening risk assessment was

conservative because it intentionally overestimated exposure. See infra at Section VI.D.

- Petitioners argue that the screening risk assessment is inadequate because it fails to take into consideration open burning/open detonation activities planned for the Facility (Petitioners' Opening Brief at 22), ignoring the evidence that the Executive Secretary had ordered the Army to cease its open burning/open detonation activities until a risk assessment showed that those activities could take place without creating unacceptable risk. (E.g., Index No. IR-164 at 1050-1051.)
- Petitioners have argued that TOCDF would violate dioxin exposure standards established by the U.S. Agency for Toxic Substances and Disease Registry (Petitioners' Opening Brief at 19), ignoring evidence that there is substantial disagreement in the scientific community about the toxicity of dioxin, and that the U.S. Environmental Protection Agency has therefore not yet established an acceptable exposure level. (E.g., Affidavit of Chris Bittner, Index No. IR-138A, at paragraph 18.)
- Petitioners argue that the Division ignored evidence of local dairy consumption in preparing its risk assessment (Petitioners' Opening Brief at 22), ignoring evidence that the information relied upon by Petitioners was provided to the Division as a "rough draft or a place to start as far as [the Division's] inquiry into the practices in Rush Valley" (Index No. IR-164 at 993), that Division employees searched for individuals consuming locally-produced dairy products and found none, and that those employees consulted with an agriculture extension agent from Utah State University who informed them that

the area was not appropriate for dairy production. (E.g., Index No. IR-164 at 992-994.)

Given the Petitioners' failure to marshal the supportive evidence, the Board's Findings of Fact should be accepted as conclusive. Those findings are highlighted in Sections VI.D and E, infra.

C. The Board Did Not Abuse Its Discretion When It Refused to Revoke the Facility's Permit or Deny Critical Permit Modifications for Alleged Violations of the Permit or Other Applicable Law.

Petitioners' appeal challenges the Board's refusal to terminate TOCDF's original permit and its refusal to deny critical permit modifications. That challenge is based in part on the EG&G's alleged operation of the facility without a permit and upon other alleged violations (Petitioners' Opening Brief at 34, 39-40), presumably related to operational incidents outlined in Section IV.B.2.c. (Id. at 25-30). The Board agrees that it has discretion to revoke or refuse to grant a permit or permit modification based on the owner or operator's compliance history. The Board does not agree, however, that it is required to do so even if the facility has violated permit conditions or other legal requirements. The language of the statute is clearly discretionary, not mandatory:

> Approval of a nonhazardous solid or hazardous waste operation plan *may* be revoked, in whole or in part, if the person to whom approval of the plan has been given fails to comply with that plan.

Utah Code Ann. § 19-6-108(12) (1995 and Supp. 1997) (emphasis added).

Petitioners rely on Utah Code Ann.§ 19-6-108(10)(c) in arguing that permit revocation and permit modification denial is appropriate, but that provision does not apply. It provides:

> (10) The executive secretary may not approve a *commercial* nonhazardous solid or hazardous waste operation plan . . . unless it contains the information required by the board, including: . . . (c) compliance history of an owner or operator of a proposed commercial nonhazardous solid or hazardous waste treatment, storage, or disposal facility, which may be applied by the executive secretary in a nonhazardous solid or hazardous waste operation plan decision, including any plan conditions.

Utah Code Ann. § 19-6-108(10)(c) (1995 and Supp. 1997) (emphasis added). This provision applies only to commercial facilities-- facilities built to manage waste in order to earn a profit.[3] It does not apply to facilities such as TOCDF which are designed to manage wastes created and owned by the owner or operator. Even if the provision did apply, it requires only that information be provided. It does not require that a particular result should apply if an applicant has had compliance problems.

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[3] Although the term "commercial hazardous waste facility" is not explicitly defined, apparently through oversight, it is reasonable to use a definition parallel to that for a commercial solid waste facility:

> "Commercial nonhazardous solid waste treatment, storage, or disposal facility" means a facility that receives, for profit, nonhazardous solid waste for treatment, storage, or disposal.

Utah Code Ann. § 19-6-102(3)(a) (1995 and Supp. 1997). The term "commercial hazardous waste facility" is also implicitly defined in section 19-6-118(1)(a) of the SHWA:

> An owner or operator of any commercial hazardous waste or mixed waste disposal or treatment facility *that primarily receives hazardous or mixed wastes generated by off-site sources not owned, controlled, or operated by the facility or site owner or operator*, and that is subject to the requirements of Section 19-6-108, shall collect the fee under Subsection (2) from the generator.

Utah Code Ann. § 19-6-118(1)(a) (1995 and Supp. 1997) (emphasis added). The TOCDF facility does not fit within either of these definitions.

The Board's thoughtful questioning of witnesses throughout the hearing (e.g., Index No. IR-163 at 530-541; IR-164 at 961-978), its careful deliberations (Index No. IR-169 at 1154 through 1218) and its "Order," (Index No. IR-173 and Addendum B) make clear that the Board carefully considered the alleged failures, both individually and collectively, and concluded that any action against the permit was unwarranted. Petitioners have not demonstrated any abuse of discretion by the Board in failing to terminate TOCDF's permit or deny it necessary permit modifications. The Board's decision should therefore be respected.

D. The Evidence Supports the Board's Conclusion That TOCDF Operations Do Not Threaten Human Health or the Environment and That Releases from TOCDF Have Been Minimized

1. The Screening Risk Assessment Was Properly Performed and Conservatively Estimates Risk from Exposure to TOCDF Emissions.

Petitioners rely heavily upon their re-interpretation of the Division's Screening Risk Assessment (SRA), and drafts of that SRA, to support their contention that emissions from TOCDF will endanger human health and the environment in violation of Utah Code Ann. § 19-6-108(9)(b) (1995 and Supp. 1997), and Utah Admin. Code R315-3-20(b)(5)(ii) (1997). With respect to these allegations, the Board made the following findings of fact:

- "The SRA followed applicable EPA guidance." Board's Order, Index No. IR-173 and Addendum B at 4, paragraph 11.
- "In keeping with EPA guidance and current risk assessment practice, the SRA used conservative assumptions to determine the resulting risk estimates . . . ." Board's Order, Index No. IR-173 and Addendum B at 5, paragraph 12.
- "With respect to cancer effects of dioxin, the risk assessment used EPA's current conservative methodology to calculate overall cancer risks from TOCDF emissions and found that the overall cancer risks do not exceed EPA guidance levels for ten, fifteen

and thirty year operating periods. The SRA did not include a calculation of non-cancer effects of dioxin exposure because EPA had not adopted a reference dose for dioxin." Board's Order, Index No. IR-173 and Addendum B at 5, paragraph 14.

- "There is insufficient evidence to conclude that low level exposure to dioxin that may be caused by operation of the facility will cause, or are [sic] likely to cause, adverse human health effects." Board's Order, Index No. IR-173 and Addendum B at 6, paragraph 16.

- "[T]he Screening Risk Assessment was performed using applicable EPA guidance and met all requirements for a health risk assessment. The SRA indicates that TOCDF can be operated as designed within the risks established by EPA for emissions as set forth in the design and construction." Board's Order, Index No. IR-173 and Addendum B at 11, paragraph 6.[4]

Using these findings of fact, the Board concluded that the preponderance of the evidence supports the Executive Secretary's approval of TOCDF's trial burn plans, permit and permit modifications. (Board's Order, Index No. IR-173 and Addendum B at 11, paragraph 8.)

The Board's findings of fact should be accepted as conclusive given Petitioners' failure to marshal the evidence. See Section VI.B., supra. It is also appropriate for this Court to grant some "operational discretion" to the Board, and therefore to grant its application of these facts to the law some deference. Drake, 939 F.2d at 181.

Even absent such a presumption, the Board's position should still prevail. Ample evidence was adduced to show that the screening risk assessment conservatively estimates risk. For example, Division toxicologist Chris Bittner explained that the TOCDF Screening Risk Assessment was biased to avoid underestimating-- and probably overestimates-- risk. (Index No. IR-138A, at 2, 3, paragraphs 9 and 12.) Division risk assessment contractor Helen

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[4] The findings in this paragraph are found in that portion of the Board's order entitled "Conclusions of Law and Reasons for Decision"; however, they are clearly findings of fact.

Sellers also explained that the TOCDF Screening Risk Assessment generally overestimated risk. (Index No. IR-164 at 965, 966, 971, and 972.) Given these conservative inputs, it is not scientifically possible to use the SRA to show that anyone is endangered. This SRA, like any screening risk assessment, can only be used to show that a particular risk level is not exceeded.

There is also ample evidence to show that the screening risk assessment was properly performed using EPA guidance (Affidavit of Chris Bittner, Index No. IR-138A, at paragraphs 4, 9, 14), and showed that risks from TOCDF emissions would not exceed Division and EPA standards (Id. at paragraphs 14 and 20). The record also gives substantial evidence for rejecting the dioxin level limits that Petitioners would have liked the SRA to use (Id. at paragraphs 17 and 18).

Petitioners have pointed to no statutory or regulatory provision requiring performance of a screening or other risk assessment; there is no such requirement. Ordinarily the Division relies on compliance with regulatory requirements to protect human health and the environment. In this case, however, the Executive Secretary chose to perform a screening risk assessment to afford an additional level of assurance appropriate to the nature of the facility. (Affidavit of Dennis R. Downs, IR-138B at 3, paragraph 11.)

2. Incidents at the Facility Do Not Demonstrate That TOCDF Operations Threaten Human Health or the Environment, or That Releases Have Not Been Minimized.

Petitioners rely in large part on evidence of alleged violations of the permit, hazardous waste rules, or state statutes to support their argument that TOCDF operations threaten human health or the environment, and fail to minimize releases. As described in Section VI.C of this

brief, Petitioners have not demonstrated that the Board abused its discretion when it considered these incidents and determined to take no action.

Even if a less deferential standard of review is used, however, Petitioners' argument must fail. With respect to these allegations, the Board made the following findings:

- "The Board finds that the facility does not pose an imminent threat to human health or and the environment, that TOCDF can prevent or minimize releases, that the facility can achieve the required DRE, and that it meets emergency preparedness requirements. With proper responses to incidents or concerns, appropriate reviews and changes in or temporary suspensions of operations, the Army and EG&G have operated the facility in such a way as to minimize the release of hazardous waste and to avoid imminent hazards and mitigate nay impacts to public health." (Board's Order, Index No. IR-173 and Addendum B at 4, paragraph 10.)

- "Petitioners did not present evidence that either the Army or EG&G has had a poor compliance history on safety and environmental issues or has failed to comply with legal or permit requirements in connection with TOCDF. The Board finds no evidence sufficient to justify revocation or termination of the Army and EG&G's permit on these grounds." (Board's Order, Index No. IR-173 and Addendum B at 7, paragraph 18.)

- "Operations at TOCDF during the shakedown period have proceeded deliberately to ensure that full-scale operations will be conducted in a manner that maximizes the protection of TOCDF workers, the public and the environment." (Board's Order, Index No. IR-173 and Addendum B at 7, paragraph 20.)

Both findings of fact and findings applying law to facts are included in these determinations by the Board. To the extent the Board has made findings of fact, they should be accepted as conclusive given Petitioners' failure to marshal the evidence. See Section VI.B., supra. Together with the findings applying law to facts, which should be granted some deference for reasons described supra at Section VI.C, these findings are sufficient to overcome Petitioners' objections to facility operations.

E. **The agency appropriately issued a permit modification that included EG&G as an operator.**

The Board agreed with the Executive Secretary's position that, because use of subcontractors or contractors is not unusual, and because the Army had ultimate responsibility for the TOCDF facility and was permitted as its owner and operator, it was not necessary for EG&G to be permitted as well. Board's Order, Index No. IR-173 and Addendum B at 9, paragraphs 1 and 2. The Board found that the Executive Secretary had properly exercised his discretion in adding EG&G as a co-permittee. Id.

Even if Petitioners had established that EG&G should have been permitted, however, they have not and cannot show that such a breach necessarily requires denial of a request to be included as a co-permittee, or that failure to deny such a request is an abuse of the Board's discretion. See part IV.C, supra. The Board's exercise of discretion is particularly appropriate in this case, where the Executive Secretary testified that it was his understanding of the law that EG&G did not need to be permitted. It would be particularly unreasonable to apply the harshest of administrative remedies against EG&G for acting in accordance with an understanding of the law that was shared by the head of the agency responsible for enforcing hazardous waste laws.

F. **The Board Did Not Violate Petitioners' Procedural Rights by Limiting the Time Granted Petitioners to Present Their Case.**

Constitutional due process requires a "fair trial in front of a fair tribunal," including "the opportunity to be heard in a meaningful way." In Re: Worthen, 926 P.2d 853, 876 (Utah 1996). These requirements are refined in the Utah Administrative Procedures Act (UAPA),

which provides a statutory right to a hearing, and a statutory right to present evidence and conduct cross-examination at that hearing. Utah Code Ann. § 63-46b-8(1)(a), (d) (1997). Obviously, those rights are not unlimited. UAPA explicitly allows the presiding officer to regulate the course of the hearing to afford all the parties *reasonable* opportunity to present their positions. Id. Petitioners have not demonstrated that they were denied that opportunity; they have not even described the nature of the evidence that would have been adduced had they been granted the additional time they request.[5]

The Board in this case did afford a reasonable opportunity to Petitioners to present their case. Twelve hours, the amount of time initially allotted to Petitioners to present their case (Index No. IR-162, at 5, lines 6 through 9) is a substantial amount of time. The Board did not require Petitioners to stop at twelve hours, however. It granted Petitioners significant amounts of additional time on several occasions. (Index No. IR-163 at 527, 528, and 543 (15 additional minutes), IR-164 at 731, 732, and 738 (30 additional minutes), IR-164 at 986, 990, 1004, 1012, 1016, 1020, 1026, 1031, 1040, 1043, 1051, and 1059 (Petitioners allowed to ask additional questions although their time had elapsed); see Board Counsel's recapitulation of time Petitioners were granted, Index No. IR-164 at 1090-1092.)

In addition, the other parties gave up some of their own time for Petitioners' use. (Index No. IR-164 at 721 (Executive Secretary grants Petitioners 15 minutes to cross examine

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[5] Petitioners did note three instances where witnesses responded to questions asked by identifying other individuals who could better answer the question. Petitioners' Opening Brief at 31. In the absence of deposition or other testimony, however, Petitioners cannot proffer testimony, and any assertion that responses from those individuals would be helpful to their case is mere speculation.

Helen Sellers); Index No. IR-164 at 905 (Executive Secretary grants Petitioners another ten minutes to examine Helen Sellers); Index No. IR-164 at 769 (Army/EG&G grant Petitioners ten minutes); Index No. IR-164 at 905-906 (Army and EG&G grant Petitioners an additional 30 minutes).)

Finally, the Board allowed Petitioners to submit over five inches of documentary evidence (PX-1 through PX-48, but excluding PX-19, 24, 45, 46), much of which would probably not be admissible under ordinary rules of evidence. (See, e.g., PX-9 through 11.) The Board also allowed Petitioners to submit substantial amount of transcript testimony, which all parties recognized would serve as a substitute for testimony before the Board. (Index No. IR-163, at 481-488; Index No. IR-164 at 795-796, 857-858, 883-884.)

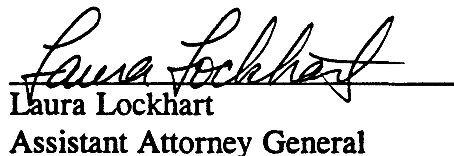
It is also reasonable to consider the efficiency with which Petitioners used the time they were allotted. For example, Petitioners did not depose Department of Environmental Quality employees Tom Ball, Ray Duda, Drew Johnson, or Rick Page. Given this failure, Petitioners are not able to proffer testimony for these witnesses and therefore cannot demonstrate that it is necessary to examine them before the Board. Similarly, Petitioners did not depose Division employee Scott Anderson. For this witness, Petitioners were essentially using hearing time to conduct discovery. (Index No. IR-162, at 183 through 192.) In addition, Petitioners spent a large amount of time examining the Executive Secretary to demonstrate that he relied on his staff's recommendations when he made his determinations. (See, e.g., Index No. IR-162 at 48-56.) This examination was unnecessary because that reliance was acknowledged in Mr. Downs' prefiled testimony (Index No. IR-138B, paragraphs three through nine), and is not legally relevant in any event.

The transcript of the hearing below shows that the Board worked to accommodate Petitioners' concerns without losing control of the proceeding. Petitioners in this case were allowed substantial discovery, were granted a very reasonable amount of time to present their case, were allowed to submit substantial documentary evidence, and were allowed to submit transcript testimony in lieu of time-consuming live witnesses. Any failure of Petitioners to present that case was not due to lack of time, but to decisions made by Petitioners-- the decision to present the majority of their case through adverse witnesses, the decision not to depose a number of those witnesses, and the decision to spend hearing time on a matter that was not at issue.

VII. CONCLUSION

For the foregoing reasons, the Utah Solid and Hazardous Waste Control Board respectfully requests that this Court affirm its decision and Order below.

Respectfully submitted this 22nd day of December, 1997.



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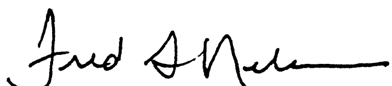
CERTIFICATE OF MAILING

I hereby certify that a copy of the foregoing BRIEF OF RESPONDENT UTAH SOLID AND HAZARDOUS WASTE CONTROL BOARD was mailed, first-class postage prepaid on December 22, 1997 to the undersigned:



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Addenda

Addendum A

ADDENDUM A
DETERMINATIVE LAW

UTAH STATUTES

19-6-103.

(1) The Solid and Hazardous Waste Control Board created by Section 19-1-106 comprises the executive director and 12 members appointed by the governor with the advice and consent of the Senate.

(2) The appointed members shall be knowledgeable about solid and hazardous waste matters and consist of:

- (a) one representative of municipal government;
- (b) one representative of county government;
- (c) one representative of the manufacturing or fuel industry;
- (d) one representative of the mining industry;
- (e) one representative of the private solid waste disposal or solid waste recovery industry;
- (f) one registered professional engineer;
- (g) one representative of a local health department;
- (h) one representative of the hazardous waste disposal industry; and
- (i) four representatives of the public, at least one of whom is a representative of organized environmental interests.

. . .

19-6-105.

(1) The board may make rules in accordance with Title 63, Chapter 46a, Utah Administrative Rulemaking Act:

- (a) establishing minimum standards for protection of human health and the environment, for the storage, collection, transport, recovery, treatment, and disposal of solid waste, including requirements for the approval of plans for the construction, extension, operation, and closure of solid waste disposal sites;

. . .

- (e) specifying the terms and conditions under which the board shall approve, disapprove, revoke, or review hazardous wastes operation plans;

UTAH STATUTES, cont.

19-6-108.

(9) No proposed nonhazardous solid or hazardous waste operation plan may be approved unless it contains the information that the board requires, including:

. . .

(b) evidence that the disposal of nonhazardous solid waste or treatment, storage, or disposal of hazardous waste will not be done in a manner that may cause or significantly contribute to an increase in mortality, an increase in serious irreversible or incapacitating reversible illness, or pose a substantial present or potential hazard to human health or the environment;

. . .

(10) The executive secretary may not approve a commercial nonhazardous solid or hazardous waste operation plan that meets the requirements of Subsection (9) unless it contains the information required by the board, including:

. . .

(c) compliance history of an owner or operator of a proposed commercial nonhazardous solid or hazardous waste treatment, storage, or disposal facility, which may be applied by the executive secretary in a nonhazardous solid or hazardous waste operation plan decision, including any plan conditions.

. . .

(12) Approval of a nonhazardous solid or hazardous waste operation plan may be revoked, in whole or in part, if the person to whom approval of the plan has been given fails to comply with that plan.

UTAH RULES

R315-3. Application and Plan Approval Procedures for Hazardous Waste Treatment, Storage, and Disposal Facilities.

R315-3-10. Conditions Applicable to Plan Approvals. The following conditions apply to all plan approvals. All conditions applicable to plan approvals shall be incorporated into the plan approvals either expressly or by reference. If incorporated by reference, a specific citation of these rules shall be given in the plan approval.

(a) Duty to comply. The permittee shall comply with all conditions of this plan approval, except that the permittee need not comply with the conditions of this plan approval to the extent and for the duration any noncompliance is authorized in an emergency permit. Any plan noncompliance except under the terms of an emergency permit, constitutes a violation of the Utah Solid and Hazardous Waste Act and is grounds for enforcement action; for plan approval termination, revocation and reissuance, or modification; or for denial of a plan approval renewal application.

. . .

UTAH RULES, cont.

R315-3-20. Hazardous Waste Incinerator Plan Approvals.

. . .

(b) For the purpose of determining feasibility of compliance with the performance standards of R315-8-15.4, and of determining adequate operating conditions under R315-8-15.6, the Executive Secretary shall establish conditions in the plan approval to a new hazardous waste incinerator to be effective during the trial burn.

. . .

(5) The Executive Secretary shall approve a trial burn plan if it finds that:

(i) The trial burn is likely to determine whether the incinerator performance standard required by R315-8-15.4 can be met;

(ii) The trial burn itself will not present an imminent hazard to human health or the environment;

(iii) The trial burn will help the Executive Secretary to determine operating requirements to be specified under R315-8-15.6; and

(iv) The information sought in R315-3-20(b)(5)(i) and (ii) cannot reasonably be developed through other means.

. . .

R315-8. Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities.

R315-8-3. Preparedness and Prevention.

3.1 Applicability. The regulations in this section apply to the owners or operators of all hazardous waste management facilities, except as provided otherwise in R315-8-1.

3.2 Design and Operation of Facility. Facilities shall be designed, constructed, maintained, and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden discharge of hazardous waste or hazardous waste constituents to air, soil, groundwater, or surface water which could threaten the environment or human health.

Addendum B

BEFORE THE UTAH SOLID AND HAZARDOUS
WASTE CONTROL BOARD

IN THE MATTER OF:	*	
The Tooele Chemical Agent Disposal Facility's Permit and Permit Modifications	*	ORDER
	*	
EPA ID No. UT5210090002	*	

This matter came before the Utah Solid and Hazardous Waste Control Board (the Board) for hearing on March 18-20 and April 17, 1997 on the First and Second Requests for Agency Action by the Petitioners, Chemical Weapons Working Group, Inc., Sierra Club and the Vietnam Veterans of America Foundation. Also participating were the Respondents, U.S Department of the Army (Army) and EG&G Defense Materials, Inc. (EG&G), and the Executive Secretary. The parties were represented by counsel. A quorum of Board members was present and voted on the motions resulting in this Order. The hearing was conducted as a formal hearing under the authority of the Utah Administrative Procedures Act, Utah Code Ann. section 63-46b-1 et seq. (1953, as amended), and Utah Admin. Code R315.

The Board, having reviewed the record in this matter, and upon consideration of the pleadings, evidence and arguments of counsel, voted to deny the First and Second Requests for Agency Action, for the reasons on that day orally assigned. The Board hereby issues its written Findings of Fact, Conclusions of Law, Statement of Reasons for Decision, and Order, as required by Utah Code Ann. section 63-46b-12.

FINDINGS OF FACT

EG&G As Co-Permittee

1. When the Executive Secretary of the Utah Solid and Hazardous Waste Control Board (Executive Secretary) approved a hazardous waste facility operation plan (plan or permit) for the Tooele Chemical Agent Disposal Facility (TOCDF) in 1989, he issued the permit to the Tooele Army Depot as owner and operator. Since the Army had ultimate responsibility for ownership and operation of the facility, the Executive Secretary properly determined that EG&G need not be included in the permit as a co-permittee.

2. The Executive Secretary, at his discretion, approved a permit modification on or about June 18, 1996, adding EG&G, a contractor working for the Army at TOCDF, as co-permittee.

Falsification of Temperature Reading

3. On or about January 9, 1997, an employee of TRC Environmental Corporation, a subcontractor to EG&G, intentionally recorded false information in connection with a temperature reading during a trial burn. The incident was investigated after being discovered by a state inspector and EG&G representatives, and the trial burn data for that incident were discarded and not used. EG&G ordered its subcontractor to permanently remove the employee from TOCDF. TRC agreed and did so.

Approval of Trial Burn Plans and TOCDF Operations

4. On June 18, 1996 and June 26, 1996, respectively, the Executive Secretary approved the Deactivation Furnace and Liquid Incinerator Agent Trial Burn Plans. Prior to approval of the trial burn plans, the Executive Secretary required the successful completion of surrogate trial

burns in both the Deactivation Furnace System (DFS) and the Liquid Incinerator (LIC). The plans for these surrogate trial burns were published for a public comment period with public meetings scheduled during the comment period. After considering the public comments, the Executive Secretary approved the surrogate trial burn plans. The Board finds and concludes that the Executive Secretary properly approved the trial burns and TOCDF agent operations for the TOCDF facility.

5. In their Second Request for Agency Action, Petitioners alleged four bases for setting aside the Executive Secretary's approval of the trial burn plans. These allegations were that the TOCDF: (1) poses an imminent threat to human health and the environment; (2) that it could not prevent or minimize releases; (3) that it could not achieve the required Destruction and Removal Efficiency (DRE); and (4) that it did not meet emergency preparedness requirements.

6. Before becoming fully operational, TOCDF has scheduled four trial burns for the DFS: (1) a "shakedown burn" with no agent; (2) an "R&D burn" with no agent; (3) a "shakedown burn" with agent; and (4) a "demonstration burn" with agent. TOCDF completed the first two burns in the DFS prior to August 22, 1996. The successful completion of these burns formed a strong basis to believe that TOCDF would complete the agent trial burns successfully.

7. Before agent operations, pursuant to a permit (the "R&D Permit") issued by the U.S. Environmental Protection Agency (EPA) under the federal Toxic Substances Control Act (TSCA), TOCDF conducted a trial burn which was intended to test, and ultimately did show, that the DFS was capable of incinerating PCBs to the regulatory 99.9999% ("six nines") level.

8. TOCDF also completed surrogate trial burns (STB) in the Liquid Incinerator #1

("LIC-1") and the DFS, and a TSCA research and development test burn in the DFS. The LIC-1 STB was conducted in June-July, 1995, and the DFS STB was conducted in October, 1995. The destruction removal efficiency achieved for each test was in excess of the six-nines required. The results of the tests were summarized in reports submitted to the Executive Secretary and the Utah Division of Solid and Hazardous Waste (DSHW).

9. The Executive Secretary issued the required approvals to initiate agent shakedown operations in preparation for trial burns with GB-filled M55 rockets. This approval included, but was not limited to, finalization of the screening risk assessment and approval of the LIC and the DFS agent trial burn plans. A letter summarizing approval to start agent shakedown operations was signed by the Executive Secretary on June 26, 1996.

10. The Board finds that the facility does not pose an imminent threat to human health and the environment, that TOCDF can prevent or minimize releases, that the facility can achieve the required DRE, and that it meets emergency preparedness requirements. With proper responses to incidents or concerns, appropriate reviews and changes in or temporary suspensions of operations, the Army and EG&G have operated the facility in such a way as to minimize the release of hazardous waste and to avoid imminent hazards and mitigate any impacts to public health.

Screening Health Risk Assessment

11. Prior to approving trial burns of chemical agent at TOCDF, DEQ through its contractor, A.T. Kearney, performed a Screening Health Risk Assessment (SRA) which analyzed the impacts of the expected TOCDF emissions on human health and the environment. The SRA followed applicable EPA guidance.

12. In keeping with the EPA guidance and current risk assessment practice, the SRA used conservative assumptions to determine the resulting risk estimates, including for example: (1) DEQ used maximum JACADS emissions levels, which it increased to account for the greater capacity of TOCDF, to model TOCDF air emissions; (2) DEQ assumed that emissions at TOCDF would be twice the JACADS detection limits in the cases where compounds were not detected; and (3) DEQ calculated the risks from exposure for up to thirty years of TOCDF emissions, when in fact, the facility is planned to operate for only about seven years.

13. The SRA examined the potential exposures to a hypothetical adult and child residing at the point of maximum off-site emissions, three different farmers modeled upon site-specific data and a subsistence fisherman. Each of these individuals was modeled to live north of TOCDF, which is downwind of the facility for 350 days of the year. For each of these six individuals, assuming simultaneous and continuous operation of all five furnaces and other TOCDF and CAMDS facilities for thirty years, the overall cancer and non-cancer risks were at or below EPA risk levels.

14. With respect to cancer effects of dioxin, the risk assessment used EPA's current conservative methodology to calculate overall cancer risks from TOCDF emissions and found that the overall cancer risks do not exceed EPA guidance levels for ten, fifteen and thirty-year operating periods. The SRA did not include a calculation of non-cancer effects of dioxin exposure because EPA had not adopted a reference dose for dioxin. Respondent's expert, Dr. Finley, calculated average daily intakes of dioxin for the six risk assessment scenarios used by DEQ in the SRA, and testified that these exposures should be below the level of concern for non-cancer effects.

15. Dr. Finley also calculated the cancer and non-cancer risks for a likely one-year trial burn period and determined that conservatively estimated risks were orders of magnitude below EPA target levels. He also declared that the conservatively estimated doses of dioxin to a breast fed infant were below the level of concern.

16. Respondents' medical expert, Dr. Guzelian, testified that low level environmental exposures to dioxin are unlikely to produce adverse human health consequences. EPA's Science Advisory Board also has reported that the scientific evidence compiled by EPA does not support a conclusion that adverse effects in humans may be occurring near the current exposure levels. There is insufficient evidence to conclude that low level exposures to dioxin that may be caused by operation of the facility will cause, or are likely to cause, adverse human health effects.

Quantitative Risk Assessment

17. Using an independent contractor, the Army arranged for preparation of both a quantitative risk assessment for the first two disposal campaigns and a comprehensive quantitative risk assessment for all TOCDF operations, performed using information specific to TOCDF, as recommended by the National Research Council. These assessments quantified the actual probability of occurrence for events leading to an accidental release of chemical agent and evaluated the potential consequences of such releases in terms of fatalities. The analysis, completed in December, 1996, confirmed the Army's earlier determination that the risks of fatalities associated with storage greatly exceed those associated with TOCDF operations. The total risks of accidental fatalities for an assumed 7.1 year period of TOCDF operations are equivalent to the risks associated with only thirty-four days of continued storage. With respect to individuals living closest to TOCDF, the risks resulting from continued storage are one hundred

times greater than the risks resulting from disposal operations.

Revocation/Termination of Plan Approval: Non-Compliance Issues

18. Petitioners have challenged the Executive Secretary's issuance of the plan approval and certain modifications thereto on grounds of the permittees' non-compliance with the law and the permit, and with an allegation that the Executive Secretary's actions were unsupported by substantial evidence or were arbitrary and capricious. Petitioners did not present evidence that either the Army or EG&G has had a poor compliance history on safety and environmental issues or has failed to comply with legal or permit requirements in connection with TOCDF. The Board finds no evidence sufficient to justify revocation or termination of the Army and EG&G's permit on these grounds.

Revocation/Termination of Plan Approval: Operational Incidents

19. Petitioners allege that the permit should be revoked or otherwise terminated because of certain incidents described in the evidence presented to the Board, namely: agent migration into filter vestibules, cracks in a concrete floor, agent migration into an observation corridor, facility response to a loss of site electrical power, fire suppression system test and temporary HVAC imbalance, agent quantification anomaly, improper hot cut-outs and the question of agent emissions in the TOCDF stack effluent gases. The Board finds no evidence sufficient to justify revocation or termination of the Army and EG&G's permit on these grounds.

20. Operations at TOCDF during the shakedown period have proceeded deliberately to ensure that full-scale operations will be conducted in a manner that maximizes the protection of TOCDF workers, the public and the environment. DSHW has engaged in extensive oversight of TOCDF operations. DSHW has an office on the facility, has conducted oversight on almost a

daily basis, and has a real-time computer link which transmits data to a computer terminal at DSHW's offices in Salt Lake City.

21. During the shakedown period, three events occurred that caused Respondents to immediately shut down operations: detection of low levels of agent in two filter unit containment vestibules, leakage of a small quantity of decontamination fluid passing through hairline cracks in a second level cement floor to a first floor electrical room, and minor agent migration into an observation corridor. Two of the incidents involved trace amounts of chemical agent migrating to unintended areas. None resulted in harm to TOCDF personnel, the public or the environment. Descriptions of the events and corrective actions taken in response to each event have been adequately explained to the Board and the Executive Secretary, and were adequately addressed by the Army and EG&G.

22. With regard to the other incidents described in paragraph 19 above, the Board finds that: adequate backup generators are in place at TOCDF, and there has never been an occasion when the backup power system failed to operate upon loss of power; the fire suppression system test and temporary HVAC imbalance was properly responded to and TOCDF personnel have received corrective training; the agent quantification system anomaly has been corrected; hot cut out procedures are a normal part of facility operations, and appropriate workers are equipped with protective equipment; and stack effluent gases are appropriately monitored by ACAMS and DAAMS systems and the agent readings in the ACAMS TREND reports were challenges to the monitoring equipment and not releases of agent.

CONCLUSIONS OF LAW AND REASONS FOR DECISION

1. In approving the permit in 1989, the Executive Secretary acted in accordance with

applicable rules and statutes, and acted in a manner that was appropriate and timely. The Board recognizes that it is not unusual for a hazardous waste facility to have subcontractors or contractors participating in operating the facility. The existence of such contractors does not necessarily mean that they are "operators" of the facility within the meaning of the Utah Solid and Hazardous Waste Act and rules issued thereunder. As the Army had ultimate responsibility for ownership and operation of the facility, the Executive Secretary properly determined that EG&G, a contractor for the Army, need not be included in the permit as a co-permittee.

2. While not legally required to add the Army's contractor, EG&G, as co-permittee, the Executive Secretary acted within his discretion and in accordance with applicable rules and statutes, including RCRA section 3005, 42 U.S.C. section 6925, and the Utah Solid and Hazardous Waste Act, Utah Code Ann section 19-6-108, and acted in a manner that was appropriate and timely, in approving the permit modification adding EG&G as co-permittee in 1996. The Executive Secretary acted properly and well within his discretion regarding the timing and processing of the TOCDF permit given the generalized nature of the applicable statutory and regulatory requirements. At no time was TOCDF constructed or operated without the required permit(s).

3. The January 9, 1997 recording of false information regarding a temperature reading by an employee of TRC during a trial burn was discovered by EG&G and DSHW personnel on that same day. The temperature readings did not affect the burn itself, but related to the temperature needed to preserve a sample. EG&G quality assurance staff immediately recorded the incident and commenced preparation of a deficiency report. At that time, EG&G ordered its subcontractor to permanently remove the employee from TOCDF. TRC agreed and did so. TRC

also indicated that the employee acted alone and took full responsibility for its employee's misconduct. TRC agreed to pay for the repeat of the trial burn run, given that the results of the January 9 run were discarded. In addition, as further corrective action to avoid any repeat of the incident, TRC conducted extensive ethics training for its employees working at TOCDF. EG&G's Risk Management Department Director, Tom Kurkjy, testified that the problem has not reoccurred.

4. The Petitioners have failed to provide data or present evidence indicating that the Executive Secretary's approval of trial burns was inappropriate or not in accordance with law. The Board recognizes the importance of trial burn data relative to understanding any emissions at TOCDF and for purposes of approval of full-scale activity at TOCDF once the trial burns are completed. The Board finds and concludes that the Executive Secretary and DSHW acted properly in approving the trial burns and in the collection of data during the trial burns.

5. Rule R315-3-20 of the Utah Administrative Code establishes the standard to issue a hazardous waste incinerator plan approval (permit). Under the provisions of R315-3-20(b)(5), the Executive Secretary shall approve a plan if: (1) the trial burn is likely to determine whether the incinerator performance standard can be met; (2) the trial burn itself will not present an imminent hazard to human health or the environment; (3) the trial burn will help the Executive Secretary determine operating requirements; and the information sought in items (1) and (2) cannot reasonably be developed through other means. In their Second Request for Agency Action, Petitioners alleged four bases (listed in paragraph 5 above) for setting aside the approval of the trial burn plans. The Board concludes that Petitioners have failed to present evidence on these issues sufficient to justify revocation, termination or modification of the plans by the

Board.

6. The Board finds and concludes that the Screening Risk Assessment (SRA) was performed using applicable EPA guidance and met all requirements for a health risk assessment. The SRA indicates that TOCDF can be operated as designed within the risks established by EPA for emissions as set forth in the design and construction. With respect to open burning / open detonation (OB/OD) activities, the Executive Secretary has prohibited the Army from conducting OB/OD until such time as a combined health risk assessment for both TOCDF operations and OB/OD is completed and indicates that the combined health risk is within acceptable limits.

7. The Petitioners failed to present evidence refuting the conclusions of the SRA, and the Board finds and concludes that the Executive Secretary acted appropriately in approving operations based on information in the SRA. The SRA was not a required study but was done at the discretion of the Executive Secretary and the Army because of their concern for human health and the environment, and the SRA will continue to be revised in the future as appropriate, for example, in the event of OB/OD activities simultaneous with TOCDF incineration operations. The risks of continued storage outweigh the risks from TOCDF operations, as outlined in the QRA.

8. The Board concludes that the preponderance of the evidence supports the Executive Secretary's approval of TOCDF's trial burn plans, permit and permit modifications, and denies Petitioners' First and Second Requests for Agency Action.

9. In further support of its decision, the Board hereby incorporates into these Conclusions of Law and Reasons for Decision all of the Findings of Fact set forth above, and also incorporates by reference the transcript of the Board members' comments and deliberations

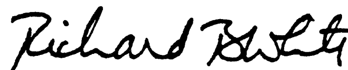
on this matter on April 17, 1997 (Transcript of Hearing, Volume No. 4).

ORDER

Based upon the foregoing Findings of Fact and Conclusions of Law, IT IS HEREBY ORDERED that the relief requested in Petitioners' First and Second Requests for Agency Action is hereby denied, and that the TOCDF permits and permit modifications approved by the Executive Secretary are upheld and shall remain in effect unless amended, revoked or otherwise affected by the Executive Secretary or by further order of the Board.

DATED this 22nd day of July, 1997.

UTAH SOLID AND HAZARDOUS WASTE CONTROL BOARD



By: Richard B. White, Board Chairman

NOTICE

Under Utah Code Ann. section 63-46b-13, any party may request that this Order be reconsidered by the Board. Any such request must be in writing, must be filed with the Board (with a copy to each party) within twenty days after the date shown on the attached mailing certificate, and must state specific grounds upon which relief is requested.

Judicial review of this Order may be sought in the Utah Court of Appeals under

applicable statutes and court rules, including Utah Code Ann. sections 63-46b-14 and -16 and 78-2a-3 and Rule 14, Utah Rules of Appellate Procedure, by the filing of a proper petition within thirty days of the date shown on the attached mailing certificate for this Order (or, if applicable, within thirty days after a request for reconsideration is denied).

CERTIFICATE OF SERVICE

I hereby certify that on the 22 day of July, 1997 a true and correct copy of the foregoing ORDER was mailed first-class, postage prepaid to:

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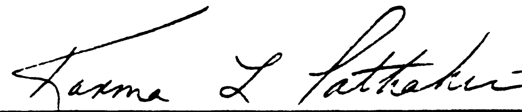


Addendum C

BEFORE THE UTAH SOLID AND HAZARDOUS
WASTE CONTROL BOARD

IN THE MATTER OF:		
The Tooele Chemical Agent Disposal Facility's Permit and Permit Modifications	*	ORDER
EPA ID No. UT5210090002	*	

This matter came before the Utah Solid and Hazardous Waste Control Board (the Board) for hearing on March 18-20 and April 17, 1997 on the First and Second Requests for Agency Action by the Petitioners, Chemical Weapons Working Group, Inc., Sierra Club and the Vietnam Veterans of America Foundation. Also participating were the Respondents, U.S Department of the Army (Army) and EG&G Defense Materials, Inc. (EG&G), and the Executive Secretary. The parties were represented by counsel. A quorum of Board members was present and voted on the motions resulting in this Order. The hearing was conducted as a formal hearing under the authority of the Utah Administrative Procedures Act, Utah Code Ann. section 63-46b-1 et seq. (1953, as amended), and Utah Admin. Code R315.

The Board, having reviewed the record in this matter, and upon consideration of the pleadings, evidence and arguments of counsel, voted to deny the First and Second Requests for Agency Action, for the reasons on that day orally assigned. The Board hereby issues its written Findings of Fact, Conclusions of Law, Statement of Reasons for Decision, and Order, as required by Utah Code Ann. section 63-46b-12.

FINDINGS OF FACT

EG&G As Co-Permittee

1. When the Executive Secretary of the Utah Solid and Hazardous Waste Control Board (Executive Secretary) approved a hazardous waste facility operation plan (plan or permit) for the Tooele Chemical Agent Disposal Facility (TOCDF) in 1989, he issued the permit to the Tooele Army Depot as owner and operator. Since the Army had ultimate responsibility for ownership and operation of the facility, the Executive Secretary properly determined that EG&G need not be included in the permit as a co-permittee.

2. The Executive Secretary, at his discretion, approved a permit modification on or about June 18, 1996, adding EG&G, a contractor working for the Army at TOCDF, as co-permittee.

Falsification of Temperature Reading

3. On or about January 9, 1997, an employee of TRC Environmental Corporation, a subcontractor to EG&G, intentionally recorded false information in connection with a temperature reading during a trial burn. The incident was investigated after being discovered by a state inspector and EG&G representatives, and the trial burn data for that incident were discarded and not used. EG&G ordered its subcontractor to permanently remove the employee from TOCDF. TRC agreed and did so.

Approval of Trial Burn Plans and TOCDF Operations

4. On June 18, 1996 and June 26, 1996, respectively, the Executive Secretary approved the Deactivation Furnace and Liquid Incinerator Agent Trial Burn Plans. Prior to approval of the trial burn plans, the Executive Secretary required the successful completion of surrogate trial

burns in both the Deactivation Furnace System (DFS) and the Liquid Incinerator (LIC). The plans for these surrogate trial burns were published for a public comment period with public meetings scheduled during the comment period. After considering the public comments, the Executive Secretary approved the surrogate trial burn plans. The Board finds and concludes that the Executive Secretary properly approved the trial burns and TOCDF agent operations for the TOCDF facility.

5. In their Second Request for Agency Action, Petitioners alleged four bases for setting aside the Executive Secretary's approval of the trial burn plans. These allegations were that the TOCDF: (1) poses an imminent threat to human health and the environment; (2) that it could not prevent or minimize releases; (3) that it could not achieve the required Destruction and Removal Efficiency (DRE); and (4) that it did not meet emergency preparedness requirements.

6. Before becoming fully operational, TOCDF has scheduled four trial burns for the DFS: (1) a "shakedown burn" with no agent; (2) an "R&D burn" with no agent; (3) a "shakedown burn" with agent; and (4) a "demonstration burn" with agent. TOCDF completed the first two burns in the DFS prior to August 22, 1996. The successful completion of these burns formed a strong basis to believe that TOCDF would complete the agent trial burns successfully.

7. Before agent operations, pursuant to a permit (the "R&D Permit") issued by the U.S. Environmental Protection Agency (EPA) under the federal Toxic Substances Control Act (TSCA), TOCDF conducted a trial burn which was intended to test, and ultimately did show, that the DFS was capable of incinerating PCBs to the regulatory 99.9999% ("six nines") level.

8. TOCDF also completed surrogate trial burns (STB) in the Liquid Incinerator #1

("LIC-1") and the DFS, and a TSCA research and development test burn in the DFS. The LIC-1 STB was conducted in June-July, 1995, and the DFS STB was conducted in October, 1995. The destruction removal efficiency achieved for each test was in excess of the six-nines required. The results of the tests were summarized in reports submitted to the Executive Secretary and the Utah Division of Solid and Hazardous Waste (DSHW).

9. The Executive Secretary issued the required approvals to initiate agent shakedown operations in preparation for trial burns with GB-filled M55 rockets. This approval included, but was not limited to, finalization of the screening risk assessment and approval of the LIC and the DFS agent trial burn plans. A letter summarizing approval to start agent shakedown operations was signed by the Executive Secretary on June 26, 1996.

10. The Board finds that the facility does not pose an imminent threat to human health and the environment, that TOCDF can prevent or minimize releases, that the facility can achieve the required DRE, and that it meets emergency preparedness requirements. With proper responses to incidents or concerns, appropriate reviews and changes in or temporary suspensions of operations, the Army and EG&G have operated the facility in such a way as to minimize the release of hazardous waste and to avoid imminent hazards and mitigate any impacts to public health.

Screening Health Risk Assessment

11. Prior to approving trial burns of chemical agent at TOCDF, DEQ through its contractor, A.T. Kearney, performed a Screening Health Risk Assessment (SRA) which analyzed the impacts of the expected TOCDF emissions on human health and the environment. The SRA followed applicable EPA guidance.

12. In keeping with the EPA guidance and current risk assessment practice, the SRA used conservative assumptions to determine the resulting risk estimates, including for example: (1) DEQ used maximum JACADS emissions levels, which it increased to account for the greater capacity of TOCDF, to model TOCDF air emissions; (2) DEQ assumed that emissions at TOCDF would be twice the JACADS detection limits in the cases where compounds were not detected; and (3) DEQ calculated the risks from exposure for up to thirty years of TOCDF emissions, when in fact, the facility is planned to operate for only about seven years.

13. The SRA examined the potential exposures to a hypothetical adult and child residing at the point of maximum off-site emissions, three different farmers modeled upon site-specific data and a subsistence fisherman. Each of these individuals was modeled to live north of TOCDF, which is downwind of the facility for 350 days of the year. For each of these six individuals, assuming simultaneous and continuous operation of all five furnaces and other TOCDF and CAMDS facilities for thirty years, the overall cancer and non-cancer risks were at or below EPA risk levels.

14. With respect to cancer effects of dioxin, the risk assessment used EPA's current conservative methodology to calculate overall cancer risks from TOCDF emissions and found that the overall cancer risks do not exceed EPA guidance levels for ten, fifteen and thirty-year operating periods. The SRA did not include a calculation of non-cancer effects of dioxin exposure because EPA had not adopted a reference dose for dioxin. Respondent's expert, Dr. Finley, calculated average daily intakes of dioxin for the six risk assessment scenarios used by DEQ in the SRA, and testified that these exposures should be below the level of concern for non-cancer effects.

15. Dr. Finley also calculated the cancer and non-cancer risks for a likely one-year trial burn period and determined that conservatively estimated risks were orders of magnitude below EPA target levels. He also declared that the conservatively estimated doses of dioxin to a breast fed infant were below the level of concern.

16. Respondents' medical expert, Dr. Guzelian, testified that low level environmental exposures to dioxin are unlikely to produce adverse human health consequences. EPA's Science Advisory Board also has reported that the scientific evidence compiled by EPA does not support a conclusion that adverse effects in humans may be occurring near the current exposure levels. There is insufficient evidence to conclude that low level exposures to dioxin that may be caused by operation of the facility will cause, or are likely to cause, adverse human health effects.

Quantitative Risk Assessment

17. Using an independent contractor, the Army arranged for preparation of both a quantitative risk assessment for the first two disposal campaigns and a comprehensive quantitative risk assessment for all TOCDF operations, performed using information specific to TOCDF, as recommended by the National Research Council. These assessments quantified the actual probability of occurrence for events leading to an accidental release of chemical agent and evaluated the potential consequences of such releases in terms of fatalities. The analysis, completed in December, 1996, confirmed the Army's earlier determination that the risks of fatalities associated with storage greatly exceed those associated with TOCDF operations. The total risks of accidental fatalities for an assumed 7.1 year period of TOCDF operations are equivalent to the risks associated with only thirty-four days of continued storage. With respect to individuals living closest to TOCDF, the risks resulting from continued storage are one hundred

times greater than the risks resulting from disposal operations.

Revocation/Termination of Plan Approval: Non-Compliance Issues

18. Petitioners have challenged the Executive Secretary's issuance of the plan approval and certain modifications thereto on grounds of the permittees' non-compliance with the law and the permit, and with an allegation that the Executive Secretary's actions were unsupported by substantial evidence or were arbitrary and capricious. Petitioners did not present evidence that either the Army or EG&G has had a poor compliance history on safety and environmental issues or has failed to comply with legal or permit requirements in connection with TOCDF. The Board finds no evidence sufficient to justify revocation or termination of the Army and EG&G's permit on these grounds.

Revocation/Termination of Plan Approval: Operational Incidents

19. Petitioners allege that the permit should be revoked or otherwise terminated because of certain incidents described in the evidence presented to the Board, namely: agent migration into filter vestibules, cracks in a concrete floor, agent migration into an observation corridor, facility response to a loss of site electrical power, fire suppression system test and temporary HVAC imbalance, agent quantification anomaly, improper hot cut-outs and the question of agent emissions in the TOCDF stack effluent gases. The Board finds no evidence sufficient to justify revocation or termination of the Army and EG&G's permit on these grounds.

20. Operations at TOCDF during the shakedown period have proceeded deliberately to ensure that full-scale operations will be conducted in a manner that maximizes the protection of TOCDF workers, the public and the environment. DSHW has engaged in extensive oversight of TOCDF operations. DSHW has an office on the facility, has conducted oversight on almost a

daily basis, and has a real-time computer link which transmits data to a computer terminal at DSHW's offices in Salt Lake City.

21. During the shakedown period, three events occurred that caused Respondents to immediately shut down operations: detection of low levels of agent in two filter unit containment vestibules, leakage of a small quantity of decontamination fluid passing through hairline cracks in a second level cement floor to a first floor electrical room, and minor agent migration into an observation corridor. Two of the incidents involved trace amounts of chemical agent migrating to unintended areas. None resulted in harm to TOCDF personnel, the public or the environment. Descriptions of the events and corrective actions taken in response to each event have been adequately explained to the Board and the Executive Secretary, and were adequately addressed by the Army and EG&G.

22. With regard to the other incidents described in paragraph 19 above, the Board finds that: adequate backup generators are in place at TOCDF, and there has never been an occasion when the backup power system failed to operate upon loss of power; the fire suppression system test and temporary HVAC imbalance was properly responded to and TOCDF personnel have received corrective training; the agent quantification system anomaly has been corrected; hot cut out procedures are a normal part of facility operations, and appropriate workers are equipped with protective equipment; and stack effluent gases are appropriately monitored by ACAMS and DAAMS systems and the agent readings in the ACAMS TREND reports were challenges to the monitoring equipment and not releases of agent.

CONCLUSIONS OF LAW AND REASONS FOR DECISION

1. In approving the permit in 1989, the Executive Secretary acted in accordance with

applicable rules and statutes, and acted in a manner that was appropriate and timely. The Board recognizes that it is not unusual for a hazardous waste facility to have subcontractors or contractors participating in operating the facility. The existence of such contractors does not necessarily mean that they are "operators" of the facility within the meaning of the Utah Solid and Hazardous Waste Act and rules issued thereunder. As the Army had ultimate responsibility for ownership and operation of the facility, the Executive Secretary properly determined that EG&G, a contractor for the Army, need not be included in the permit as a co-permittee.

2. While not legally required to add the Army's contractor, EG&G, as co-permittee, the Executive Secretary acted within his discretion and in accordance with applicable rules and statutes, including RCRA section 3005, 42 U.S.C. section 6925, and the Utah Solid and Hazardous Waste Act, Utah Code Ann section 19-6-108, and acted in a manner that was appropriate and timely, in approving the permit modification adding EG&G as co-permittee in 1996. The Executive Secretary acted properly and well within his discretion regarding the timing and processing of the TOCDF permit given the generalized nature of the applicable statutory and regulatory requirements. At no time was TOCDF constructed or operated without the required permit(s).

3. The January 9, 1997 recording of false information regarding a temperature reading by an employee of TRC during a trial burn was discovered by EG&G and DSHW personnel on that same day. The temperature readings did not affect the burn itself, but related to the temperature needed to preserve a sample. EG&G quality assurance staff immediately recorded the incident and commenced preparation of a deficiency report. At that time, EG&G ordered its subcontractor to permanently remove the employee from TOCDF. TRC agreed and did so. TRC

also indicated that the employee acted alone and took full responsibility for its employee's misconduct. TRC agreed to pay for the repeat of the trial burn run, given that the results of the January 9 run were discarded. In addition, as further corrective action to avoid any repeat of the incident, TRC conducted extensive ethics training for its employees working at TOCDF. EG&G's Risk Management Department Director, Tom Kurkjy, testified that the problem has not reoccurred.

4. The Petitioners have failed to provide data or present evidence indicating that the Executive Secretary's approval of trial burns was inappropriate or not in accordance with law. The Board recognizes the importance of trial burn data relative to understanding any emissions at TOCDF and for purposes of approval of full-scale activity at TOCDF once the trial burns are completed. The Board finds and concludes that the Executive Secretary and DSHW acted properly in approving the trial burns and in the collection of data during the trial burns.

5. Rule R315-3-20 of the Utah Administrative Code establishes the standard to issue a hazardous waste incinerator plan approval (permit). Under the provisions of R315-3-20(b)(5), the Executive Secretary shall approve a plan if: (1) the trial burn is likely to determine whether the incinerator performance standard can be met; (2) the trial burn itself will not present an imminent hazard to human health or the environment; (3) the trial burn will help the Executive Secretary determine operating requirements; and the information sought in items (1) and (2) cannot reasonably be developed through other means. In their Second Request for Agency Action, Petitioners alleged four bases (listed in paragraph 5 above) for setting aside the approval of the trial burn plans. The Board concludes that Petitioners have failed to present evidence on these issues sufficient to justify revocation, termination or modification of the plans by the

Board.

6. The Board finds and concludes that the Screening Risk Assessment (SRA) was performed using applicable EPA guidance and met all requirements for a health risk assessment. The SRA indicates that TOCDF can be operated as designed within the risks established by EPA for emissions as set forth in the design and construction. With respect to open burning / open detonation (OB/OD) activities, the Executive Secretary has prohibited the Army from conducting OB/OD until such time as a combined health risk assessment for both TOCDF operations and OB/OD is completed and indicates that the combined health risk is within acceptable limits.

7. The Petitioners failed to present evidence refuting the conclusions of the SRA, and the Board finds and concludes that the Executive Secretary acted appropriately in approving operations based on information in the SRA. The SRA was not a required study but was done at the discretion of the Executive Secretary and the Army because of their concern for human health and the environment, and the SRA will continue to be revised in the future as appropriate, for example, in the event of OB/OD activities simultaneous with TOCDF incineration operations. The risks of continued storage outweigh the risks from TOCDF operations, as outlined in the QRA.

8. The Board concludes that the preponderance of the evidence supports the Executive Secretary's approval of TOCDF's trial burn plans, permit and permit modifications, and denies Petitioners' First and Second Requests for Agency Action.

9. In further support of its decision, the Board hereby incorporates into these Conclusions of Law and Reasons for Decision all of the Findings of Fact set forth above, and also incorporates by reference the transcript of the Board members' comments and deliberations

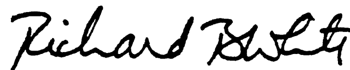
on this matter on April 17, 1997 (Transcript of Hearing, Volume No. 4).

ORDER

Based upon the foregoing Findings of Fact and Conclusions of Law, IT IS HEREBY ORDERED that the relief requested in Petitioners' First and Second Requests for Agency Action is hereby denied, and that the TOCDF permits and permit modifications approved by the Executive Secretary are upheld and shall remain in effect unless amended, revoked or otherwise affected by the Executive Secretary or by further order of the Board.

DATED this 22nd day of July, 1997.

UTAH SOLID AND HAZARDOUS WASTE
CONTROL BOARD



By: Richard B. White, Board Chairman

NOTICE

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Judicial review of this Order may be sought in the Utah Court of Appeals under

applicable statutes and court rules, including Utah Code Ann. sections 63-46b-14 and -16 and 78-2a-3 and Rule 14, Utah Rules of Appellate Procedure, by the filing of a proper petition within thirty days of the date shown on the attached mailing certificate for this Order (or, if applicable, within thirty days after a request for reconsideration is denied).

CERTIFICATE OF SERVICE

I hereby certify that on the 22 day of July, 1997 a true and correct copy of the foregoing ORDER was mailed first-class, postage prepaid to:

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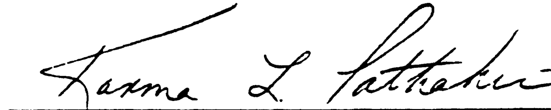

Addendum D

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DIVISION OF SOLID & HAZARDOUS WASTE
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Counsel for CWWG, VVAF, and Sierra Club

STATE OF UTAH
BEFORE THE SOLID AND HAZARDOUS WASTE CONTROL BOARD
DIVISION OF SOLID AND HAZARDOUS WASTE

IN THE MATTER OF:

THE TOOELE CHEMICAL AGENT DISPOSAL FACILITY'S PERMIT AND PERMIT MODIFICATIONS
EPA I.D. No. UT5210090002

CASE No. (PENDING)

SECOND REQUEST FOR AGENCY ACTION AND/OR PETITION TO INTERVENE SOUGHT BY THE CHEMICAL WEAPONS WORKING GROUP, SIERRA CLUB, AND VIETNAM VETERANS OF AMERICA FOUNDATION

Pursuant to the Utah Administrative Code (UAC) §§ R315-12-3; R315-12-4; R315-12-5, and the Utah Administrative Procedures Act (UAPA) §§ 63-46b-3; 63-46b-9; 63-46b-12, the Chemical Weapons Working Group, Inc. (CWWG), Sierra Club, and Vietnam Veterans of America Foundation (VVAF) request that the Utah Solid and Hazardous Waste Control Board (Board or Agency) take action to reverse the

decision of the Utah Division of Solid and Hazardous Waste (DSHW) which approved chemical weapons destruction activities at the U.S. Army's chemical weapons incinerator in Tooele County, Utah. The factual and legal bases for the this request are outlined below.

I. PARTIES

CWWG is a non-profit environmental and citizens organization incorporated in the State of Kentucky. CWWG is dedicated to protecting public health and the environment in the communities around the sites proposed by the Army and Department of Defense (DOD) for disposal of the chemical weapons stockpile, as well as throughout the world. CWWG's members reside, work and recreate in the communities around the Army, DOD and EG&G Defense Materials, Inc.'s (EG&G) chemical weapons incineration facility in Tooele County, Utah, the Tooele Chemical Demilitarization Facility (TOCDF), and in proximity to the water bodies and food sources which will be impacted by toxic emissions from the TOCDF. CWWG's members are and will be adversely affected by the Respondents' incineration of nerve agent, blister agent and other hazardous and toxic wastes at the TOCDF as a result of toxic emissions including highly toxic and environmentally persistent dioxin, dioxin-like compounds, nerve agents and blister agents. The emission of these highly toxic compounds will, as developed more fully infra, poison the air, water, soil and food sources on which the members of CWWG depend, and which directly and indirectly affect their health,

property, recreational, aesthetic and environmental interests.

Sierra Club is a national non-profit environmental organization that is dedicated to protecting public health and the environment. The Sierra Club has an Utah chapter and a Salt Lake City group. The Sierra Club has members who reside, work and recreate in the communities around the Army, DOD and EG&G's chemical weapons incineration facility in Tooele County, Utah, and in proximity to the water bodies and food sources which will be impacted by toxic emissions from the facility. Sierra Club also derives income from arranging nature outings in Utah. Sierra Club's members are and will be adversely affected by the Respondents' incineration of nerve agent, blister agent and other hazardous and toxic wastes at the TOCDF as a result of toxic emissions including highly toxic and environmentally persistent dioxin, dioxin-like compounds, nerve agents and blister agents. The emission of these highly toxic compounds will, as developed more fully infra, poison the air, water, soil and food sources on which the members of Sierra Club depend, and which directly and indirectly affect their health, property, recreational, aesthetic and environmental interests. Members of Sierra club also conduct business, recreational, educational, inspirational, and scientific activities in the vicinity of the TOCDF, including fishing in the water bodies affected thereby, on a regular and continuing basis. Members of the Sierra Club also consume fish which comes from the

numerous bodies of water affected by the TOCDF. In addition to these uses, some of Sierra Club's members obtain their drinking water from sources which are hydrologically connected to waters into which TOCDF will discharge chemical warfare agents.

VVAF is a national non-profit organization dedicated to protecting the interests of Vietnam Veterans. Vietnam veterans reside, work and recreate in the communities around the various sites proposed by the Army and DOD for disposal of chemical weapons. Many of these veterans have been exposed to the ultra toxic chemical dioxin as a contaminant in the herbicide/defoliant agent orange which was extensively sprayed by the military in Vietnam. The EPA has recently issued a report based on a multi-year study of dioxin exposure and has concluded that the average resident of the United States is already overexposed to dioxin as a result of existing and past dioxin emission sources, and that the current average exposure to dioxin is 10-100 times higher than a safe dose. This report confirms that this high national dioxin exposure has resulted primarily from the atmospheric transport of dioxin air emissions from numerous sources, primarily incinerators which have caused nationwide dioxin contamination even in areas where no incinerators or other dioxin sources are located. The Vietnam veterans unfortunately are likely to have an even higher total exposure than the average because of their additional exposure in Vietnam. The Army, DOD, and EG&G chemical weapons

incineration facility in Tooele County, Utah will be a significant additional source of dioxin emissions that will add to an already unacceptable dioxin exposure nationally, which additional dioxin exposure is likely to cause harm to Vietnam veterans.

The likely respondents include the United States Department of the Army (Army) and Department of Defense (DOD), agencies of the United States, are the owners of the Tooele Chemical Agent Disposal Facility (TOCDF), including the incineration components thereof. The Army and DOD are responsible for the incineration trial burn and "production burn" for chemical weapons components including ultra toxic nerve and blister agents.

In addition, EG&G Defense Materials, Inc. (EG&G) is the operator of the TOCDF incineration facility which Petitioners allege herein is in violation of state law and poses an imminent hazard to public health and the environment.

II. LEGAL AUTHORITY AND JURISDICTION

Petitioners originally filed a compliant in federal court challenging the operation of TOCDF because it will pose an imminent and substantial endangerment to public health and the environment due to the planned and accidental releases of dangerous chemicals including: nerve agents, blister agents, metals, polychlorinated biphenyls (PCBs), dioxins, and other dioxin-like chemicals. On July 1, 1996, Federal District Judge Tena Campbell ruled that the Federal Court would abstain from ruling on Petitioners' imminent

and substantial endangerment claims as well as other claims because to do so would "interfere with Utah's policies and ... [Utah's regulatory] scheme and would be disruptive of Utah's attempt to ensure uniformity in its hazardous waste policy." CWWG, et al. v. United States, Civil No. 2:96-CV-425C (July 1, 1996 transcript at 4 - 5). This ruling requires Petitioners to bring their claims to the Board for hearing and resolution.

Jurisdiction and authority for Petitioners' Second Request for Action (RFA) / Intervention is governed by the Utah Solid & Hazardous Waste Act (SHWA) § 19-6-104; UAC §§ R315-12-3; R315-12-4; R315-12-5, and the UAPA §§ 63-46b-3; 63-46b-9, and 63-46b-12.

III. FACTS AND REASONS FOR THE REQUESTED ACTION

On June 26, 1996, Dennis Downs (Director DSHW) and Carol Sisco (DEQ Public Information) issued a notice announcing that "[c]hemical weapons destruction activities are ready to begin at the U.S. Army's incinerator located about 50 miles southwest of Salt Lake City in Tooele County." Public Information memo at 1 and Letter from Downs to Coughlin and Thomas dated June 26, 1996 Re: Agent Trial Burn Approvals. The issued announcement concluded that "[i]ncineration approval came after the ... [DSHW] determined the Army had met all conditions imposed as part of a permit issued in 1989. Approval was granted following state certification of the emergency response procedure, final analysis of the health risk assessment and review of the incinerators."

Memo at 2. Petitioners seek reversal by the Board of these approvals.

Similarly, on July 1, 1996 the DSHW also announced approval of 1) a Class 2 permit modification approving the deactivation furnace system (DFS) agent trial burn plan, 2) a class 2 permit modification approving the liquid incinerator #1 (LIC1) agent trial plan, and 3) approval of the health risk assessment. Petitioners likewise seek reversal of these approvals.

In further support of Petitioners challenge to the above-listed approvals and the imminent and substantial endangerment *posed by trial burn and/or post trial burn* operations at *TOCDF* Petitioners provide the following bases in support of their RFA / Intervention.

1. There is no dispute that the world's store of obsolete chemical weapons must be destroyed. The potential for military use of these weapons must be eliminated. However, the issue is not whether such demilitarization and detoxification should be done, but how to do it safely.

2. The Army, DOD and EG&G are currently preparing to incinerate nerve and blister agents at the TOCDF incineration facility. TOCDF involves five incineration or thermal treatment units:

a) Two Liquid Incinerators (LICs): The LICs include a primary and a secondary combustion chamber and are designed to burn nerve

agents -- GB, VX and mustard -- as well as liquid laboratory waste and spent decontamination liquid. The two LICs are virtually identical;

b) The Deactivation Furnace System (DFS): The rocket pieces, PCB containing rocket firing/shipping tubes, explosives and propellants are fed into the DFS which includes a rotary kiln and afterburner (after leaving the DFS, the rocket pieces are placed on a heated discharge conveyor (HDC) for further decontamination);

c) The Dunnage Incinerator (DUN): The DUN is designed to burn both non-contaminated and contaminated dunnage from the munitions processing operations -- wooden rocket pallets and mortar shipping boxes, charcoal and filter media, used protective suits, and demister candle filter media;

d) The Metal Parts Furnace (MPF): The MPF is designed to heat metal parts, including ton containers, bombs, spray tanks, and artillery projectiles and their burster wells, after most of the agent has been drained and explosives removed, to 1000 degrees Fahrenheit and maintain that temperature for 15 minutes to vaporize remaining agent contamination which is discharged as a gas and passed through an afterburner.

3. The five incinerators exhaust their combustion gases into a stack. The stack discharges combustion gases, including chemical warfare agent into the environment.

4. The TOCDF incinerators and combustion units are not closed

loop systems. Notwithstanding pollution control systems, these TOCDF combustion units emits large volumes of combustion gases as well as fugitive emissions into the environment. These combustion gases and fugitive emissions that are released to the environment contain a variety of highly toxic compounds including unburned chemical warfare agents as well as dioxin and dioxin-like compounds which are among the most, if not the most, toxic chemical compounds yet discovered.

5. The building in which the incinerators are housed contains a heating ventilation and air conditioning (HVAC) system. The HVAC system is designed to filter any chemical agent that escapes the processing equipment or incinerators and enters the building. However, the HVAC is not efficient enough to prevent all of the escaped agent from leaving the building by being discharged out the HVAC stack and into the outside environment.

6. The brine reduction area (BRA) is designed to cool the brine from the pollution abatement system (PAS). In processing brine, gases as discharged out the BRA stack and into the environment. The gases that are discharged out the BRA stack may include chemical agent.

7. The Army and EG&G have submitted to the Utah Department of Environmental Quality (DEQ) Surrogate Trial Burn Reports for the LIC 1 and DFS incinerators. The Surrogate is a chemical that is burned in the incinerator to predict how the incinerator will

perform when it is burning chemical warfare agent. The Surrogate is suppose to be more difficult to burn than the chemical warfare agent.

8. The Surrogate Trial Burns evidence that when chemical warfare agent is burned in the LIC 1 and DFS, some chemical warfare agent will be released out the stack and into the ambient air.

9. The site specific TOCDF Risk Assessment also gives an estimate of the emissions rate of chemical warfare agents out of the stack.

10. The underlying premise of the Army's 1982 decision to use incineration for the disposal of nerve agents and the detoxification of other residuals from demilitarization of chemical weapons was, in large part, the then-common assumption that hazardous waste incineration was a well-defined, mature technology. A mature technology is a technology that is productive, safe for workers and protective of human and environmental health. At the time of the Army's decision, there was an obvious dearth of documentation on incinerator performance, safety and impacts.

11 . However, as noted infra, since the 1982-85 period when the Army selected incineration as the method for detoxification/disposal of the components of demilitarized chemical weapons and EPA issued the original RCRA permit for JACADS, the prototype experimental facility in the Pacific, numerous studies

and reports have been published, describing various limitations of incinerator performance and environmental impacts. This technology was, and still is, practiced and promoted not because it is a proven, mature technology, but because it is expeditious and liability-free for the generators of the materials incinerated (i.e., the pollutants emitted from incinerator stacks and those deposited in the ashes and residues of pollution control systems cannot be easily traced back to the generators of the waste).

12. The Petitioners have attempted to convince the Respondents to abandon their longstanding commitment to incineration technology for disposal of chemical weapons and to adopt a safer alternative method. These efforts have been intensified in the last two years with the release of the EPA Dioxin Reassessment reports in September, 1994, which clearly documented the already unacceptable health risks posed by existing incineration facilities nationwide, and with the emergence of several additional alternative technologies that have obvious advantages to incineration in terms of the ability to safely treat nerve and blister agents.

13. Petitioners have made comments at various points in the administrative processes relating to permitting and risk assessment for the TOCDF, expressing various technical objections to the project as not being in compliance with applicable law and posing an unacceptable risk to public health and the environment. Most of those concerns remain unaddressed either by the Respondents or the

federal and state permitting agencies. Petitioners have been instrumental in bringing, and continue to bring, to public attention new and disturbing information from former employees at the TOCDF and the prototype JACADS facility regarding threats to public safety and violations of law at the TOCDF. The Respondents have not addressed this evidence and these allegations by Petitioners in a timely or responsible manner, and the violations of law and threats to public health and the environment continue.

14. Unless the relief that Petitioners pray for herein is granted, the health, property, recreational and other interests of Petitioners will be adversely affected and irreparably harmed by the Respondents' illegal discharge of ultra toxic chemical poisons including the chemical warfare agents GB, VX, and HD, as well as the ultra toxic chemical poison dioxin and dioxin-like compounds. While the public interest is served by the responsible destruction of chemical weapons in a manner that complies with applicable laws that protect public health and the environment, the public interest is not served by the Respondents' reckless rush to destroy the chemical weapons stockpile in such a dangerous manner that defeats the purpose of the Congressional mandate under which the Army and DOD act, and violates the several federal and state laws that govern the Respondents' actions. As Congress has made crystal clear in 1992 in passing the Federal Facilities Compliance Act, codified at 42 U.S.C. § 6961, the federal agencies, including the

Army and DOD, are not placed above the state environmental laws. To the contrary, the Army and DOD must comply to the letter with all substantive and procedural provisions of all state and local environmental protection laws. 42 U.S.C. § 6961.

TOCDF POSES AN IMMINENT AND SUBSTANTIAL ENDANGERMENT TO PUBLIC HEALTH AND THE ENVIRONMENT

15. Respondents' incineration of nerve agent, blister agent, and other hazardous and toxic wastes at the TOCDF results in the discharge of substantial amounts of toxic chemicals including the ultra toxic chemical poison dioxin, nerve agents GB and VX and blister agents as a result of both the incomplete destruction (by incineration) of the chemical agents in the wastes as well as the actual creation of dioxin and dioxin-like compounds as a product of the combustion process.

16. Dioxin is a shorthand term for a whole family of chemicals (including furans) with similar chemical structures and health and environmental impacts. The United States Environmental Protection Agency has found dioxin to be extremely toxic and carcinogenic even at low doses. The type of dioxin considered by EPA to be the most toxic and carcinogenic is 2,3,7,8-tetrachlorinated dibenzo-p-dioxin (2,3,7,8-TCDD). The numbers 2,3,7, and 8 represent the position of chlorine atoms around the benzene rings that make up the chemical structure of dioxin.

17. In performing health assessments where dioxin is involved,

the potencies of each member of the family of dioxins and the sister chemical furans that are being emitted from an incinerator are often expressed as toxic equivalents of 2,3,7,8 - TCDD. In this system TCDD as the most potent form of dioxin receives a toxic potency value of one (1), and the other dioxins' toxic potencies are expressed in relation to it as .5, .1, and the like. The toxicity of a mixture of various types of dioxins and furans can be expressed in terms of the equivalent toxic units of 2,3,7,8-TCDD by multiplying the quantity of each type of dioxin by its toxic equivalency factor and summing the results. The phrase toxic equivalents is typically referred to as TEQs.

18. The chemicals in the dioxin family are persistent in the environment and can accumulate in soil, and bioaccumulate and biomagnify in the food chain via plants and animals, eventually reaching humans. It takes seven years to a lifetime, depending on the individual, for humans to eliminate half of the dioxin they ingest from their bodies. It can take as long as ten years or more for half the dioxin present in soil to break down.

19. Based on EPA data on dioxin emissions from hazardous waste incinerators and EPA's latest Dioxin Reassessment report (EPA, September 1994) which reports research and analysis on the levels of toxicity and carcinogenicity of dioxin, taken together with the Army and Utah DEQ risk assessments for TOCDF, the TOCDF incinerators are expected to emit more than a million toxic doses

of dioxin. Dioxin is the most powerful chemical poison discovered to date. It thus becomes a critical question as to the extent to which such massive amounts of emitted poison will ultimately be captured in the food chain, inhaled, or otherwise result in human exposure. The extent of harm to public health will depend on the answer to this question.

20. The Army and the Utah Department of Environmental Quality (DEQ), in the Risk Assessments for the TOCDF incinerators, failed to properly take into account the existing high dioxin exposure from existing sources nationally and in the Salt Lake area in the assessment and calculation of risk from dioxin emissions from the TOCDF incinerators. This is a critical error because the occurrence of non-cancer adverse health effects from dioxin exposure is thought by EPA to be a threshold phenomenon. That is, harm from dioxin exposure other than cancer is thought to not occur if the total dose to which a person is exposed is lower than a certain threshold dose. This threshold dose, which has not been specifically identified with any certainty by EPA or any agency or scientist to date, has been conservatively estimated for purposes of agency public health and environmental protection decision-making via calculation of a reference dose (RfD) (a virtually safe dose).

21. The critical nature of this risk assessment error by Respondents is clear when considered in light of the EPA's 1994

Dioxin Reassessment findings that national exposure to dioxin from existing sources is already one to two orders of magnitude (10-100 times) greater than any virtually safe dose or RfD EPA might calculate for dioxin. See EPA 1994 Health Assessment for Dioxin, Vol. III, p. 9-82 to 9-86.

22. The 1994 EPA Dioxin Health Assessment reports clearly identify the dangers posed by exposure to dioxin and dioxin-like chemicals. A few of the key additional conclusions reached by EPA regarding dioxin are:

- Chlorinated dibenzo-p-dioxins (CDDs) and related compounds (collectively commonly known simply as dioxins) are contaminants present in a variety of environmental media. This class of compounds has caused great concern in the general public as well as intense interest in the scientific community. Much of the public concern revolves around the characterization of these compounds as among the most potent "man-made" toxicants ever studied. Indeed, these compounds are extremely potent in producing a variety of effects in experimental animals based on traditional toxicology studies at levels hundreds or thousands of times lower than most chemicals of environmental interest.[1]

- There are 75 individual compounds comprising the CDDs [chlorinated dioxins], depending on the positioning of the chlorine(s), and 135 different CDFs [chlorinated furans]. These are called individual congeners. Likewise, there are 75 different positional congeners of BDDs [brominated dioxins] and 135 different congeners of BDFs [brominated furans] ... There are 209 PCB [polychlorinated biphenyl] congeners ... Mixed chlorinated and brominated congeners also exist increasing the number of compounds considered dioxin-

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[1]Health Assessment Document for 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (TCDD) and Related Compounds, EPA/600/BP-92/001c, U.S. EPA, August 1994 at 9-1. Hereafter this document will be referred to as "EPA 1994."

like.[2]

- Extensive evidence has accumulated over the past 20 years to demonstrate that the immune system is a target for toxicity of ... TCDD [2,3,7,8 tetra chlorinated dioxins] ... and structurally related halogenated aromatic hydrocarbons (HAHs), including the polychlorinated dibenzofurans (PCDFs), polychlorinated biphenyls (PCBs), and polybrominated biphenyls (PBBs). This evidence was derived from numerous studies in various animal species, primarily rodents, but also guinea pigs, rabbits, monkeys, marmosets, and cattle. Epidemiological studies also provide evidence for the immunotoxicity of HAHs in humans.[3]

- The potential for dioxins and related compounds to cause reproductive and developmental toxicity has been recognized for many years. Recent laboratory studies have broadened our [EPA's] knowledge in this area and suggest that altered development may be among the most sensitive TCDD endpoints.[4]

- There have been several long-term studies designed to determine if TCDD is a carcinogen in experimental animals. All of these studies have been positive and demonstrate that TCDD is a multi-site carcinogen, is a carcinogen in both sexes and in several species including the Syrian hamster, is a carcinogen in sites remote from the site of treatment, and increases cancer incidence at doses well below the MTD.[5]

- The mechanistic basis for inter-individual variation is unclear, and this lack of knowledge complicates approaches to estimate human risks from experimental animal data. However, several studies indicate that, for the most part, humans appear to respond like experimental animals for biochemical and carcinogenic effects.[6]

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2 EPA 1994 at 9-6 to 9-7.

[3]EPA 1994 at 4-1.

[4]EPA 1994 at 5-1.

[5]EPA 1994 at 6-38.

[6]EPA 1994 at 6-39 to 6-40.

- TCDD alters a number of other pathways involved in the regulation of cell differentiation and proliferation. The specific relationships of these effects to multistage carcinogenesis are not known, but the broad array of effects on hormone systems, growth factor pathways, cytokines, and signal transduction components is consistent with the notion that TCDD is a powerful growth dysregulator.[7]

- Human exposure to ... TCDD ... has been associated with non-cancer effects in most systems. The majority of effects have been reported among occupationally exposed groups, such as chemical production workers, pesticide users, and individuals who handled or were exposed to materials treated with ... TCDD-contaminated pesticides, and among residents of communities contaminated with tainted waste oil (Missouri, USA) and industrial effluent (Seveso, Italy).[8]

- Estimates of exposure to dioxin-like CDDs and CDFs based on dietary intake are in the range of 1-3 pg TEQ/kg body weight/ day. Estimates based on the contribution of dioxin-like PCBs to toxicity equivalents raise the total to 3-6 pg TEQ/kg body weight/day. This range is used throughout this characterization [EPA reassessment] as an estimate of average background exposure to dioxin-like CDDs, CDFs, and PCBs. This average background exposure leads to body burdens in the human population that average 40-60 pg TEQ/ g lipid (40-60 ppt [parts per trillion]) when all dioxins, furans, and PCBs are included. High-end estimates of body burden of individuals in the general population (approximately the top 10% of the general population) may be greater than three times higher.[9]

- With regard to average intake, humans are currently exposed to background levels of dioxin-like compounds on the order of 3-6 pg TEQ/kg body weight/day, including dioxin like PCBs. This is more than 500 fold higher than EPA's 1985 risk-specific dose associated with a plausible

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[7]EPA 1994 at 6-38.

[8]EPA 1994 at 7-87.

[9]EPA 1994 at 9-77 to 9-78.

upper bound, ... and several hundredfold higher than revised risk specific dose estimates ... Plausible upper-bound risk estimates for general population exposures to dioxin and related compounds, therefore, may be as high as ... one in ten thousand to one in a thousand ... .[10]

- ... TCDD is the most potent form of a broad family of xenobiotics that bind to an intracellular protein known as the Ah receptor. Other members of this family include halogenated hydrocarbons such as the PCBs, naphthalenes, and dibenzofurans, as well as nonhalogenated species such as 3-methylcholanthrene and B-naphthaflavone. The biological properties of dioxins have been investigated extensively in over 5,000 publications and abstracts since the identification of TCDD as a chloracnegen ... [in 1957].[11]

- From the complex picture that evolves from the ... data, it is amply evident that TCDD elicits a plethora of toxic responses, both after short term and long term exposure.[12]

- ... [B]ased on the results of two or more studies, recent evidence suggests that chloracne, elevated GGT[13] levels, an increased risk of diabetes, and altered reproductive hormone levels (luteinizing hormone, follicle-stimulating hormone, and testosterone) appear to be long-term consequences of exposure to ... TCDD ... .[14]

- Based on all of the data reviewed in this reassessment and scientific inference, a picture emerges of TCDD and related compounds as potent toxicants in animals with the potential to produce a spectrum of effects. Some of these effects may be occurring in humans at very low levels and some may be resulting in adverse impacts on

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[10]EPA 1994 at 9-86.

[11]EPA 1994 at 8-1.

[12]EPA 1994 at 3-34.

[13] Gamma glutamyl transpeptidase.

[14] EPA 1994 at 7-238.

human health.[15]

23. Government risk assessments of TOCDF and related facilities and scientific studies of dioxin provide a reasonable basis for concluding that the incineration of the chemical weapons waste at the TOCDF will lead to actual levels of dioxin and other toxic chemical exposure that will pose serious risk of harm to Petitioners and the public, including cancer, immune and reproductive system damage and other harmful effects to human health.

24. The TOCDF incinerators will release such dangerous quantities of 2,3,7,8-TCDD (dioxin) and its equivalents (combinations of the other types of dioxins and furans) that even if only a small fraction of the dioxin emitted is captured by the food chain, great harm will occur to human health as well as to wildlife via, _inter alia_, cancer, reproductive and immunosuppressant effects.

25. Dioxin is _created_ by the incineration of wastes in general. EPA, DEQ and the Army admit that dioxin will be a product of incomplete combustion from the incineration process.

26. The Respondents' hazardous waste incineration operation at the TOCDF poses a serious imminent and substantial endangerment to human health and the environment, given all the facts stated _supra_ and:

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[15]EPA 1994 at 9-87.

a) the failure of the above named Respondents to adequately analyze and identify the toxic and hazardous contaminants expected to be present in the emissions from the TOCDF hazardous waste incinerators, and the toxicity of these emissions;

b) the failures of the Respondents and DSHW to properly evaluate the risks to public health and the environment posed by the expected toxic emissions from the TOCDF incineration facility including, but not limited to, the health risks created for farmers and their families and breast-feeding infants;

c) the incinerators' inability to adequately destroy hazardous wastes and hazardous constituents including PCBs, dioxins, furans, blister agents and nerve agents and related chemicals at concentrations found in the waste feeds;

d) the inability of existing pollution controls to adequately control toxic emissions from the facility;

e) the nature of the acutely hazardous/toxic waste feed (including its chemical constituents and the concentrations of each) and resulting releases into the air of both unburned toxic chemicals and toxic metals in the waste feed, including nerve and blister agents, and toxic chemical by-products of incomplete combustion, including arsenic, lead, polychlorinated dibenzo-p-dioxins, polychlorinated dibenzofurans, polychlorinated biphenyls, other dioxin-like chemicals and hundreds of other products of incomplete combustion (PICs), approximately 90% of which have yet

to be identified by the Respondents, EPA or any party, which toxic chemical releases will pose serious risk of harm to human health (cancer, immune and reproductive system damage and other effects) and the environment;

f) the occurrence of upset conditions, off-normal conditions and accidents during operation of the incinerator facility which will result in even greater releases of toxic chemicals from the incinerator stack and fugitive emissions sources at the facility;

g) the proximity of residential and agricultural areas and the existence of significant routes of human exposure to toxic chemicals, including nerve agents, released from the site, which include exposure via consumption of contaminated locally produced food including dairy products and locally grown beef, grains and produce, as well as via inhalation and direct contact with nerve agent and contaminated soil;

h) the considerable evidence that nerve agent will be released from the TOCDF in substantial quantities if operation with live agent begins, which evidence includes the problematic performance of the JACADS prototype facility on Johnston Atoll, and confirmed release of live nerve agent at JACADS, for which the Army was fined by EPA, the risk assessments prepared for TOCDF as well as for the proposed Anniston, Alabama and Umatilla, Oregon facilities which report a significant risk of harmful acute exposures to nerve agent released from the facilities, and the recent disturbing disclosures

of former TOCDF safety officer Steve Jones regarding numerous safety and environmental violations and problems which the Army, DOD and EG&G have failed to address responsibly; and

i) the virtual certainty that if agent is released from TOCDF in substantial quantities, such as in a maximum credible event (reasonable worst case accident or malfunction) fatalities will occur in the civilian population, and likely in large numbers, with as many as 1 fatality in every 100 persons exposed at a distance of 15-40 miles.

27. The Risk Assessments prepared for the Army and DEQ on the dangers of the TOCDF incineration project, while not admitting *per se* an unacceptable risk, provide evidence on their faces that the risk to public health of adverse health effects is significant as a result of toxic emissions from the incinerators. As one example, the dioxin exposures resulting from the dioxin emissions from the TOCDF incinerators which are admitted in the DEQ Risk Assessment, when taken together with existing dioxin exposures which are documented in EPA's 1994 Dioxin Reassessment reports, would be expected to cause harm to local residents, based on simple calculations using EPA risk assessment methods.

28. The Army and DEQ Risk Assessments also significantly underestimate the health risk from the TOCDF incinerators as a result of the omission in the risk assessments of entire categories of toxic chemical emissions, including nerve agent combustion and

degradation byproducts. Moreover, draft versions of the DEQ's risk assessment found unacceptable risks, but were later changed without public knowledge.

29. Considering all of these circumstances, the incineration of nerve and blister agents, PCBs and other hazardous wastes by the Respondents at the TOCDF poses an imminent and substantial endangerment to public health and the environment.

DESTRUCTION AND REMOVAL EFFICIENCY VIOLATIONS

30. Respondents have failed to demonstrate compliance with the legal requirements for treating and disposing of hazardous waste via incineration.

31. The chemical weapons wastes to be incinerated at the TOCDF are admitted by EPA and the Utah DEQ to be Resource Conservation and Recovery Act (RCRA) regulated hazardous wastes subject to at least a 99.99% DRE requirement. RCRA requires via federal regulations, which are adopted by Utah, that a 99.99% destruction and removal efficiency (DRE) be achieved on the key hazardous constituents (the principal organic hazardous constituents or POHCs) included in the wastes during the post-trial burn incineration process, in addition to requiring a demonstration of a 99.99% DRE during a trial burn. See UAC §§ R315-8-15.3, 15.4, 40 C.F.R. §§ 264.342, 264.343.

32. As a result of a recently discovered but poorly understood scientific phenomenon, chemicals in the waste feed in low

concentrations are difficult to destroy at high destruction efficiencies. Chemicals present in the waste feed to an incinerator at concentrations of less than 1,000 parts per million (ppm) will not be incinerated at a 99.9999% DRE and chemicals in the incinerator waste feed at concentrations of less than 100 ppm will not achieve a 99.99% DRE.

33. This is a phenomenon which EPA has studied, documented and acknowledges (EPA, Kramlich 1993).

34. The TOCDF dunnage incinerator and metal parts furnace will be burning materials contaminated with nerve agent and other hazardous wastes that have a concentration of less than 1000 ppm in some cases and even less than 100 ppm in some cases.

35. Consequently, Respondents will be unable to consistently destroy the nerve agents, which are POHCs in the TOCDF chemical weapons wastes, to the 99.99% destruction and removal efficiency (DRE) required by law using the currently proposed incineration technology for the TOCDF metal parts furnace and the TOCDF dunnage incinerator. The excess nerve, blister agent and other hazardous waste emissions resulting from this failure to achieve a 99.99% DRE during the production burn violate the DRE regulation, as well as pose a health threat to workers and the public.

INABILITY TO PREVENT AND MINIMIZE RELEASES OF AGENT AND HAZARDOUS WASTES

36. RCRA and its Utah counterpart, including 42 U.S.C. §§ 6924 and 6925 and 40 C.F.R. Part 264 (e.g. 40 C.F.R. §§ 264.15; 264.31; 264.347; UAC R315-8-2.6; UAC R315-8-3.2; UAC R315-8-15.7), require Respondents to take all necessary actions to prevent and minimize releases of hazardous wastes and hazardous waste constituents into the environment.

37. The Army, DOD and EG&G have failed to take the required measures to prevent release of nerve and blister agent from the TOCDF facility in light of the problematic performance of the JACADS and CAMDS prototype facilities and confirmed releases of live nerve agent, for which the Army was fined by EPA at JACADS, and the numerous unexplained "false" alarms from the Army's air and emissions monitoring systems signaling the release of live nerve agent.

38. The risk assessments prepared for TOCDF as well as for the proposed Anniston, Alabama chemical weapons incineration facility report a significant risk of harmful acute exposures to nerve agent released from the facilities.

39. Recent disturbing disclosures have been made by former TOCDF chief safety officer Steve Jones regarding numerous safety and environmental violations and problems at TOCDF which could lead to releases of nerve and blister agent. Many of these violations

and problems remain uncorrected.

VIOLATION OF FEDERAL AND UTAH EMERGENCY PREPAREDNESS REQUIREMENTS

40. Respondents are not in compliance with the emergency preparedness and contingency plan requirements of RCRA. 42 U.S.C. Subpart C and D; UAC R315-8-3.1, 3.7, 4.1, 4.2, 4.3, 4.6. Also see RCRA Permit for TOCDF, § II.H.4.b. The Army, DOD and EG&G are ill prepared to respond to a release of nerve agent at TOCDF in terms of planning, equipment, personnel training, off-site treatment capability and coordination with hospitals and emergency response personnel. The required personnel training has not been completed. The required cooperative agreements with emergency response agencies have not been effected, and the requisite off-site treatment capability does not exist.

41. The required emergency response plans for TOCDF, both on-site and off-site, must be designed around the reasonable worst case event or release of nerve agent and hazardous chemicals (maximum credible event). However, the Respondents have yet to identify or reveal the nature of such a reasonable worst case event and have not designed their emergency response plans to deal with such an event.

42. The Respondent Army had initiated such an analysis of a maximum credible incinerator stack release of unburned nerve agent

which indicated that even at 40 miles beyond the TOCDF boundary *10,000 fatalities would occur per million population (one percent* fatalities). Former Army Inspector General's Office inspector and former Chief TOCDF safety officer Steve Jones observed work in progress on this analysis during a past inspection at TOCDF but the Army has acted as if such an analysis does not exist.

IV. RELIEF REQUESTED

Based upon the foregoing analysis and the attached supporting documents, Petitioners request the following:

1. A formal hearing on the issues raised herein, including adequate time for discovery.

2. Consolidation of this RFA / Intervention with Petitioners' First RFA.

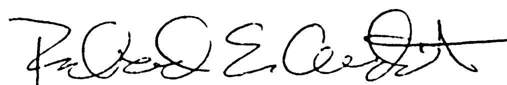
3. Reversal by the Board of the DSHW's approvals noted herein.

4. An order from the Board preventing the Respondents from beginning any shakedown, trial burn, and/or other operations involving the treatment, storage, or disposal of nerve agents, blister agents, and any other hazardous waste at TOCDF.

5. An order from the Board requiring that Petitioners are fully compensated for all fees and costs associated with this hearing process.

6. Any other relief that the Board deems just and appropriate.

Respectfully submitted,



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CERTIFICATE OF SERVICE

I hereby certify that a copy of Petitioners' Second Request for Action and/or Intervention was served on Respondents on this 22nd day of July, 1996 by serving copies to the parties listed below in the manner indicated.

Robert Ukeiley

VIA FIRST CLASS MAIL, POSTAGE PREPAID

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