UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

CHEMICAL WEAPONS WORKING GROUP, et al., Plaintiffs, v. UNITED STATES DEPARTMENT OF DEFENSE, and UNITED STATES ARMY, Defendants, and EG&G Defense Materials, Inc., Defendant-Intervenor.	Civil Action No. 03-00645 (RKE)

MEMORANDUM OPINION
(August 19, 2009)

Plaintiffs Chemical Weapons Working Group, *et al*. ("plaintiffs")[1] commenced this action, pursuant to the National Environmental Policy Act, 42 U.S.C. § 4332 (2000) ("NEPA"), to challenge the United States Army's ("Army") plan to destroy by incineration, at storage sites around the country, chemical weapons made during and after World War II (the "Plan" or "Army's Disposal Plan"). Plaintiffs' claims relate to four incineration facilities located at: Anniston, Alabama; Pine Bluff, Arkansas; Tooele, Utah; and Umatilla, Oregon (collectively, the

[1] Plaintiffs are a group of "twenty local, regional, and national organizations concerned about the Army's plans to dispose of stockpiles of munitions [at sites] containing chemical warfare agents" through an incineration process. Pls.' Mem. Supp. Mot. Summ. J., Docket No. [28], 2.

"Challenged Sites").[2] In their complaint, plaintiffs allege that defendants violated NEPA by failing to provide a supplemental analysis reflecting new alternative destruction technologies that could be used at the Challenged Sites.[3] Plaintiffs seek declaratory and injunctive relief, citing violations of NEPA and the Administrative Procedure Act, 5 U.S.C. § 701 ("APA"). Defendants, the United States Army and Department of Defense ("defendants") move for summary judgment and plaintiffs cross-move for summary judgment, pursuant to Federal Rule

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[2] There are eight facilities where the destruction of chemical agents takes place: (1) Aberdeen, Maryland; (2) Blue Grass, Kentucky; (3) Newport, Indiana; (4) Pueblo, Colorado; (5) Pine Bluff, Arkansas; (6) Tooele, Utah; (7) Umatilla, Oregon; and (8) Anniston, Alabama. The first four sites contain only one type of chemical agent stored in ton containers, while the latter four – the Challenged Sites – also contain "rockets, artillery shells and other explosive munitions that contain chemical agent." Fed. Defs.' Mem. Supp. Mot. Summ. J. on All Claims, Docket No. [26], 4. Plaintiffs' claims only relate to the latter four sites, contending that at these sites "[s]ignificant new information pertaining to alternatives and the impacts of incineration ha[ve] been ignored or improperly downplayed by the [d]efendants." Pls.' Mem. Supp. Mot. Summ. J., Docket No. [28], 24.

[3] On August 4, 2003, plaintiffs filed a motion for a temporary restraining order that would have barred the Anniston facility from beginning incineration operations. Judge Thomas Penfield Jackson denied both motions and plaintiffs' motion for a preliminary injunction on August 8, 2003. *Chem. Weapons Working Group v. United States Dep't of Def.*, Civil Action No. 03-CV-00645 (Aug. 8, 2003) , Docket No. [12]. Since that time, the parties have been engaged in settlement negotiations. *See Chem. Weapons Working Group v. United States Dep't of Def.*, Civil Action No. 03-CV-00645 (Apr. 18, 2005) , Docket No. [45] (order granting motion to stay proceedings); *Chem. Weapons Working Group v. United States Dep't of Def.*, Civil Action No. 03-CV-00645 (July 19, 2005) , Docket No. [47] (same); *Chem. Weapons Working Group v. United States Dep't of Def.*, Civil Action No. 03-CV-00645 (Sept. 29, 2005), Docket No. [49] (same); *Chem. Weapons Working Group v. United States Dep't of Def.*, Civil Action No. 03-CV-00645 (Nov. 22, 2005) , Docket No. [51] (same). The parties were unable to reach settlement. *See Chem. Weapons Working Group v. United States Dep't of Def.*, Civil Action No. 03-CV-00645 (Feb. 21, 2006) , Docket No. [52] 2 (fifth joint status report). In addition, plaintiffs requested and were granted leave to supplement the record, and the parties' supplemental briefing concluded on March 7, 2008. *See* Defs.' Suppl. Mem. Supp. Mot. Summ. J., Docket No. [104]; Pls.' Suppl. Mem. Supp. Mot. Summ. J., Docket No. [92]; Suppl. Mem. Supp. EG&G's Mot. Summ. J., Docket No. [103]. Oral argument took place on February 25, 2009.

of Civil Procedure 56(c). *See* Fed. Defs.' Mem. Supp. Mot. Summ. J. on All Claims, Docket No. [26], ("Defs.' Mem."); Pls.' Mem. Supp. Mot. Summ. J., Docket No. [28], ("Pls.' Mem."). In addition, defendant-intervenor EG&G Defense Materials, Inc. ("EG&G" or "defendant-intervenor") moves for summary judgment. *See* EG&G Defense Materials, Inc.'s Mem. Supp. Mot. Summ. J., Docket No. [30], ("Def.-Int.'s Mem."). Jurisdiction lies pursuant to 28 U.S.C. § 1331. For the reasons set forth below, the court grants defendants' and defendant-intervenor's motions for summary judgment and denies plaintiffs' cross-motion.

BACKGROUND

The Army's Disposal Plan is the result of a congressional mandate to destroy the nation's stockpile of chemical warfare agents. *See* 50 U.S.C. § 1521(a). The impetus for congressional action was the execution of the 1993 Chemical Weapons Convention by the United States, which required signatory nations to destroy their chemical weapons stockpiles. *See* Convention on the Prohibition of the Development, Prod., Stockpiling, and Use of Chem. Weapons and on Their Destruction art. IV, ¶6, Jan. 13, 1993, 32 I.L.M. 800.[4]

The chemical weapons stockpile is stored at eight sites in the continental United States

[4] The Organization for the Prohibition of Chemical Weapons granted the United States an extension, as permitted by the original terms of the 1993 Chemical Weapons Convention, a treaty ratified by the United States and directly incorporated into domestic law. The modification extended the deadline for the United States to destroy one hundred percent of its chemical weapons stockpile by April 29, 2012. *See* Org. for the Prohibition of Chem. Weapons, *Annual Chemical Weapons Convention Conference Concludes; Final Stockpile Destruction Deadlines Extended to 2012*, December 11, 2006, http://www.opcw.org/news/news/article/annual-chemical-weapons-convention-conference-concludes-final-stockpile-destruction-deadlines-exten-1/.

and at a prototype incineration facility, the Johnston Atoll Chemical Agent Disposal System ("Johnston Atoll"), in the Pacific Ocean. *See* Chem. Stockpile Disposal Plan Final Programmatic Envtl. Impact Statement (January 1988), Administrative Record ("AR") Doc. 2 ("AR Doc. 2") at ix. Each site contains varying amounts and types of chemical agents:

> Chemical agents included in the stockpile are of two basic types--nerve and blister -- and are configured in a variety of munitions and bulk containers. All of the agents and munitions are at least 19 years old, and some are more than 40 years old . . . . All of the lethal chemical agents are currently stored in three basic types of configurations: (1) projectiles, cartridges, mines, and rockets containing propellant and/or explosive components, (2) projectiles and aircraft-delivered munitions that do not contain explosive components, and (3) a large quantity (about 65% of the total [continental United States] inventory) of bulk agent stored in one-ton steel containers.

AR Doc. No.2 at ix–xi.

NEPA declares a national policy of protecting and promoting environmental quality. *See* 42 U.S.C. §§ 4321, 4331(a). NEPA seeks to achieve this goal by setting procedures that federal agencies must follow when undertaking projects that will affect the environment. Regulations established by the Council on Environmental Quality ("CEQ"),[5] require agencies to take into

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[5] NEPA is the basic national charter empowering the CEQ with the protection of the environment:

> It establishes policy, sets goals (section 101), and provides means (section 102) for carrying out the policy. Section 102(2) contains "action-forcing" provisions to make sure that federal agencies act according to the letter and spirit of the Act. The regulations that follow implement section 102(2). Their purpose is to tell federal agencies what they must do to comply with the procedures and achieve the [environmental] goals of the Act.

40 C.F.R. § 1500.1.

account "the range of actions, alternatives, and impacts to be considered in an environmental impact statement." 40 C.F.R. § 1508.25. Central to NEPA's national policy is a requirement that federal agencies prepare an Environmental Impact Statement ("EIS") when issuing "proposals for . . . major federal actions significantly affecting the quality of the human environment . . . ." 42 U.S.C. § 4332(2)(C). An EIS

> is a public document designed to ensure that NEPA policies and goals are incorporated early into the programs and actions of federal agencies. An EIS is intended to provide a full, open, and balanced discussion of significant environmental impacts that may result from a proposed action and alternatives, allowing public review and comment on the proposal and providing a basis for informed decision-making.

32 C.F.R. § 651.40. Preparation of an EIS serves NEPA's goal of protecting the environment by ensuring an agency takes a "hard look" at its project's environmental effects and by making available to the public relevant information so that they "may also play a role in both the decisionmaking process and the implementation of that decision." *Robertson v. Methow Valley Citzens Council*, 490 U.S. 332, 349 (1989). Preparation of an EIS does not alone complete an agency's NEPA duties; NEPA requires agencies to review the environmental consequences of their projects after preparation of an EIS and to:

> (1) . . . prepare supplements to either draft or final environmental impact statements if:
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> > (i) The agency makes substantial changes in the proposed action that are relevant to environmental concerns; or
> >
> > (ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

40 C.F.R. § 1502.9(c)(1). Supplemental EIS reports may be required, moreover, if the new information shows that remaining government action will "'affec[t] the quality of the human environment' in a significant manner or to a significant extent not already considered" in the original EIS. *Marsh v. Oregon Natural Res. Council*, 490 U.S. 360, 374 (1989) ("*Marsh*").

The following facts concerning the steps defendants have taken pursuant to NEPA are not in dispute. *See* Defs.' Mem. 3-15; Pls.' Mem. 3-10. In addition, undisputed facts are taken from the supplemental briefs and supplemental information on the record submitted by the parties.[6] *See* Defs.' Suppl. Mem. Supp. Mot. Summ. J. ("Defs.'s Suppl. Mem."), Docket No. [104]; Pls.' Suppl. Mem. Supp. Mot. Summ. J. ("Pls.' Suppl. Mem."), Docket No. [92]; Suppl. Mem. Supp. EG&G's Mot. Summ. J. ("EG&G's Suppl. Mem."), Docket No. [103].

I. The 1988 Environmental Impact Statement

Prior to commencing the destruction of the United States' chemical weapons stockpile, the Army conducted a NEPA analysis of potential methods of accomplishing the Plan's goals. This process began in January 1986, and the Army completed and circulated a Draft Programmatic Environmental Impact Statement (the "Draft EIS") in July 1986, and then issued a Final Programmatic Environmental Impact Statement (the "Final EIS") in January 1988. *See* Record of Decision, Chem. Stockpile Disposal Program, Dep't of the Army (Feb. 23, 1988), AR

[6] On March 8, 2007, the court granted plaintiffs' motion to supplement the administrative record. *See Chem. Weapons Working Group v. United States Dep't of Def.*, Civil Action No. 03-CV-00645 (Mar. 8, 2007) , Docket No. [82] (order denying motion for reconsideration of court's order granting plaintiffs' motion to supplement the record). The court has examined the material placed on the record by the parties, and, except as noted herein, finds that material to be non-probative.

Doc. 1 ("AR Doc. 1") at 1-2.

In preparing these statements, the Army examined incineration technology using information from prior Army experience of munitions destruction, considered different locations for disposal and evaluated alternative methods of disposal, i.e., pyrolytic thermal processing, deep ocean disposal, neutralization and nuclear detonation. *See* AR Doc. 1 at 5–6; AR Doc. 2 at 2–78 to 2–88. The Army evaluated the location and technology alternatives for, among other considerations, public safety and health impacts, technological complexity, public opinion, and compatibility with legislative policy. AR Doc. 2 at 2-1 to 2-132.

The Army gave its reasons for rejecting the alternatives to incineration:

> Prior to [incineration] endorsement, the Army studied and rejected other disposal technologies as unreasonable. For example, pyrolectic thermal processing has the potential to produce other noxious products; disposal in deep ocean violates the Marine Protection Research and Sanctuaries Act; chemical neutralization is a complex reaction that produces large quantities of organic process wastes and is difficult to bring 100% conversion; and nuclear detonations have too many unexplored aspects of an obviously serious nature . . . .
>
> Several alternatives were studied, but eliminated, from further consideration for various reasons. These alternatives fall into three broad categories: strategy alternatives, technology alternatives, and transport mode alternatives.

AR Doc. 1 at 5-6 to AR Doc. 2 at 2-78. The Army rejected various alternatives for other reasons ranging from the "uncertainties of time necessary to actually remove and reinstall the . . . decontaminated equipment," (AR Doc. 2 at 2-80), to the conclusions that the "alternative would not reduce the health and environmental impacts of agent destruction," (AR Doc. 2 at 2-80), and that other alternatives would not provide "any significant cost savings over other regional

disposal center concepts." AR Doc. 2 at 2-81. Ultimately, the Army determined these alternative technologies were "either immature or unreliable in irreversibly treating chemical agents and munitions" and concluded that on-site baseline incineration was the preferred method for destruction of the nation's chemical weapons stockpile. Defs.' Mem. 7 (citing AR Doc. 1 at 5-6, AR Doc. 2 at 2-78 to 2-88).

II. The 1988 Record of Decision

A Record of Decision ("ROD") is a "public document summarizing the findings in the EIS and the basis for the decision . . . . [and is] required . . . after completion of an EIS. . . ." 32 C.F.R.§ 651.26. In 1988, the Army published a ROD that documented its decision to use incineration as the technology to destroy the chemical weapons stockpile at each of the eight sites:

> [Incineration] is warranted since on-site disposal (1) is the best choice from a public health and environmental perspective, (2) reflects a realistic appraisal of our ability to mitigate accidents, (3) is less vulnerable to terrorism or sabotage, and (4) is far less complex in terms of logistics, including security and emergency response.

AR Doc. 1 at 5. The ROD stated that the Army would delay the incineration of the stockpile in order to evaluate the incineration process as conducted at a full-scale operational level:

> [T]his Record of Decision anticipates, of necessity, a delay in the completion of the program beyond the current 1994 deadline. A prudent program decision that meets the Congressional strictures on environmental protection and safety should allow for testing the complete process at full-scale operations, such as [Johnston Atoll], prior to the operation at any other site. The [Johnston Atoll] operation will include a 15-18 month operational test period . . . .

AR Doc. 1 at 6. In 1986, the Army began constructing Johnston Atoll, a full-scale operational incineration plant intended to serve as a prototype to test the use of incineration at any of the eight stockpile sites in the United States. *See* Chem. Stockpile Disposal Program Chem. Agent and Munitions Destruction Operations at Anniston, Alabama, 2003 Record of Environmental Consideration, AR Doc. 11 ("AR Doc. 11") at 2–9 to 2–10, A–1 to A–20.

III. The 1990-1993 Operational Verification Testings

The National Defense Authorization Act of 1989 required the Army to complete Operational Verification Testing ("OVT") of Johnston Atoll before proceeding to destroy the stockpiles located at the eight sites around the country. *See* Nat'l Def. Authorization Act, Fiscal Year 1989, Pub.L. No. 100-456, § 846, 102 Stat. 2027-30 (1988). After successfully completing a series of OVTs at Johnston Atoll between 1990 and 1993, the National Academy of Science's National Research Council ("NRC"), an independent body charged with reviewing the chemical weapon stockpile disposal programs, concluded that there was:

> no readily applicable alternative technology to incineration of energetic[7] components for munition configurations found in the chemical stockpile and no alternative to high-temperature treatment for reliable decontamination of metal parts . . . . [T]here was no alternative technology available which had been adequately demonstrated to allow for replacement of the liquid incinerator [and thus the NRC recommends that the program] proceed expeditiously with the use of incineration technology . . . .

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[7] "Energetic components" refers to the live chemical material found in both explosives and propellants. *See* FEIS, Design, Construction and Operation of One or More Pilot Test Facilities for Assembled Chem. Weapons Destruction Technologies at One or More Sites (Apr. 2002), AR Doc 54 at S-1.

AR Doc. 11 at 2–15 and A–1 to A–20. Accordingly, the NRC found that the baseline incineration process was the only examined method that safely and effectively destroyed both chemical agents and munitions. The Secretary of Defense certified to Congress that the OVT at Johnston Atoll had been a success, after which the Army began preparation for the study and use of incineration of stockpiles at the four Challenged Sites: Anniston, Alabama; Pine Bluff, Arkansas; Tooele, Utah; and Umatilla, Oregon. *See* Defs.' Mem. 28.

IV. The Site-Specific EISs (1989-1997)

Following the publication of the Final EIS in 1988, the Army prepared and published individual, site-specific EISs. Specifically, the Army issued site-specific Draft EISs for Tooele in March 1989 (AR Doc. 46); Anniston in November 1990 (AR Doc. 14); Pine Bluff in May 1995 (AR Doc. 33); and Umatilla in December 1995 (AR Doc. 33). Defs.' Mem. 9. Thereafter, the Army published site-specific Final EISs for Tooele in July 1989, followed by a ROD in August 1989 (AR Docs. 44-45); Anniston in May 1991, followed by a ROD in July 1991 (AR Docs. 12-13); Umatilla in May 1996, followed by a ROD in January 1997 (AR Docs. 48-50); and Pine Bluff in May 1997, followed by a ROD in July 1997 (AR Docs. 30-32). Defs.' Mem. 9-10. In these site-specific assessments, the Army incorporated discussion and analysis from the Final EIS report but focused on issues specific to each site, including the environmental effects resulting from the creation and operation of chemical agent and munitions destruction facilities. *See* Defs.' Mem. 9.

The site-specific EISs and the subsequent RODs documented the Army's decision to use

incineration technology for the disposal of the stockpile at the four Challenged Sites. These documents concluded that no alternative technology had been proven to successfully destroy the chemical weapons and that on-site incineration was a safe and effective means to destroy the stockpiles, taking into consideration public concerns regarding the environment, safety and public health for each of the sites and surrounding communities. The stockpile at the Challenged Sites consisted of "ton containers of agent as well as projectiles, mines and rockets containing propellant and/or explosive components." Defs.' Mem. 10. Thus, for the four Challenged Sites, the Army selected on-site incineration as the "preferred alternative" based on the conclusion that there were no readily available alternatives to destroy the chemical weapons stockpile at these sites and that incineration was a safe and effective method.

(1) Tooele, Utah Chemical Agent Disposal Facility

In the Tooele, Utah site-specific EIS report and ROD, the Army addressed human health and environmental concerns by testing various alternative technologies, explaining the reasoning behind the agency's ultimate decisions and emphasizing the important role safety played in the Army's overall and site-specific chemical warfare destruction program:

> The [Final Programmatic Environmental Impact Statement ("FPEIS")] FPEIS addressed five alternatives: (1) continued storage of the stocks at their present locations; (2) on-site disposal of the stocks at their present storage locations; (3) relocation of the stocks to regional disposal centers at Anniston Army Depot, Alabama and Tooele Army Depot (TEAD) for destruction; (4) relocation of the stocks to a national disposal center at TEAD for destruction; and (5) relocation of the inventories at some specific sites to alternative sites, with the remainder destroyed at their present storage locations. The FPEIS identified the on-site

> disposal option as the environmentally preferred alternative and concluded that the stockpile of chemical agents and munitions stored in the continental U.S. can be destroyed in a safe, environmentally acceptable manner . . . .
>
> The Final EIS assessed specific environmental impacts of constructing and operating a chemical disposal facility at TEAD and examined several possible locations for the facility on the Depot. The Army's preferred site is near the center of Tooele Army Depot South Area, adjacent to the southwest corner of the existing chemical munitions storage area. This site is also the environmentally preferred alternative because it best meets the criteria of safety to the off-post communities, minimizes the transportation distance from the storage area, minimizes exposure to potential earthquakes, and minimizes interferences with other activities at the Depot . . . .
>
> Safety has always been of paramount importance to this program. With safety in mind, [Michael W. Own, Acting Assistant Secretary of the Army Installations and Logistics has] decided to select constructing [sic] a full scale disposal facility near the southwest center of the chemical storage area of Tooele Army Depot that uses the Johnston Atoll Chemical Agent Disposal System's (JACADS) reverse assembly and incineration technology. This selected location for the on-site disposal facility and its destruction process are best in terms of safety and public health for Tooele Army Depot as well as the surrounding communities.

ROD, Chem. Stockpile Disposal Program, Disposal of the Chem. Agents and Munitions Stored at Tooele (Aug. 30, 1989), AR Doc. 44 ("AR Doc. 44") at 1-3.

(2) Anniston, Alabama Chemical Agent Disposal Facility

At the Anniston facility the Army tested six alternatives to chemical agent incineration, compiled the results in a preliminary "Phase I" EIS report that was (1) reviewed and approved by an independent agency, Argonne National Laboratory, and (2) subsequently submitted to and

certified to Congress.

> [T]he validity of the programmatic decision for on-site disposal of the [Anniston] stockpile was given further consideration in a Phase I Environmental Report, issued in July 1989. The report used recently collected site-specific data to examine the present suitability of on-site disposal of agents and munitions store at [Anniston]. The report also examined resource data for the [Anniston] vicinity to determine whether significant resources exist that could affect implementation of on-site disposal at [Anniston]. No new or unique site-specific information was found that would change or contradict the conclusions of the FPEIS for [Anniston].
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> The Phase I report was independently reviewed by Argonne National Laboratory (ANL). ANL's comments and recommendations for the scope and content of the [Anniston] site-specific EIS were provided in a December 1989 report . . . . On April 13, 1990, the findings and conclusions of the Phase I report, the independent review, and the addendum to the Phase I report were certified to the Congress. This certification initiated the preparation of the Site-Specific Environmental Impact Statement (EIS) for the Disposal of Chemical Agents and Munitions Stored at [Anniston].
>
> As presented in the Final EIS, the Department of Army proposes to implement the programmatic decision of on-site destruction of the lethal unitary chemical agents and munitions stored at [Anniston]. The Final EIS assesses the potential environmental effects of construction and operation of the proposed reverse assembly and incineration facilities needed for on-site destruction of the chemical agents and munitions . . . .
>
> The six on-site alternative locations for the disposal facility were identified using criteria based on safety distances that must be met to continue [Anniston's] activities. The Army's preferred site location is in the north central portion of the depot . . . . This site location is also the environmentally preferred alternative because, of the locations considered, it was assessed as having the lowest potential adverse human health impact. In the assessment of the other areas of potential impact, namely socioeconomic, ecological, resource and environmental quality, the differences among the on-

site locations alternatives were not found to be significant.

ROD, Chem. Stockpile Disposal Program, Disposal of the Chem. Agents and Munitions Stored at Anniston (July 12, 1991), AR Doc. 12 ("AR Doc. 12") at 2-4.

As with the Tooele facility, the Army outlined its reasoning and concluded that any environmental and human health risks would be "minimal." As summarized by the subsequent site-specific Final EIS report in May 1991:

> The risk analyses conducted for the FPEIS, and verified for [Anniston] with more recent and detailed data, indicated that continued storage would result in greater risk than the proposed on-site disposal. In addition, the potential size of the impact area for accidents (as well as the number of potential fatalities) occurring during continued storage . . . would be greater than for areas affected by on-site disposal accidents.

Disposal of Chem. Agents and Munitions Stored at Anniston, Final EIS (May 1991), AR Doc. 13 ("AR Doc. 13") at xxii. Consequently, the Army concluded that the stockpile of chemical agents and munitions at Anniston could be destroyed in a safe and environmentally acceptable way, and that the environmental impact of facility construction and operations would be minimal.

(3) Umatilla, Oregon Chemical Agent Disposal Facility

As to the Umatilla Facility, following the Phase I report discussed previously, the Army explained that

> [t]he report used detailed, site-specific data to examine the suitability of on-site disposal of agents and munitions stored at [Umatilla]. No new or unique information was found that would change or contradict the conclusions of the Final Programmatic EIS and the report that recommended the preparation of the site-

> specific EIS should proceed . . . .
>
> After publication of the Draft EIS, the NEPA process was suspended while the Army and the National Research Council (NRC) examined whether there were viable alternative technologies to incineration capable of safely and efficiently disposing of the chemical weapons stockpiles located throughout the continental United States. These studies were undertaken in response to numerous concerns raised by members of the public about the incineration process. The NEPA review of the proposal to implement baseline incineration at [Umatilla] resumed following the issuance of NRC and Army alternative technology reports in 1994.

ROD, Chem. Stockpile Disposal Project, Disposal of the Chem. Agents and Munitions Stored at Umatilla (Jan. 31, 1997), AR Doc. 48 ("AR Doc. 48") at 2. With respect to concerns raised about dioxins and furans, the January 1997 ROD reports:

> The public has registered significant concerns over the potential human health and ecological impacts from disposal emissions containing particles of incomplete combustion (i.e., dioxins and furans). The potential environmental impacts are analyzed in the Revised Final EIS. This analysis supports the conclusion that dioxin or furan emissions during incident-free operations would be less than the EPA-established levels of concern and consequently pose no significant impacts to human health (including Native Americans residing on or near the Umatilla or Yakima reservations) or the ecosystem (including endangered or threatened species existing near [Umatilla]). Some process residue from facility operations would contain non-agent hazardous constituents. These wastes would be analyzed to ensure the absence of agent before being packaged, transported and disposed of in permitted waste facilities consistent with Resource Conservation and Recover Act (RCRA) regulations.

AR Doc. 48 at 5-6. In other words, in 1997 the Army took account of the public's concern in its Revised Final EIS, assessing the risk posed by dioxin and furan emissions at the Umatilla, Utah site. Analysis of these risks concluded that dioxin and furan levels emitted from incineration

would "pose no significant impacts to human health . . . or the ecosystem." AR Doc. 48 at 5-6.

(4) Pine Bluff, Arkansas Chemical Agent Disposal Facility

The Pine Bluff facility contains twelve percent, by weight, of the United States' chemical weapons stockpile. The Army's site-specific EIS explained that:

> The chemical agent munitions inventory at [Pine Bluff] consists primarily of M55 rockets, M23 land mines, and agent-filled ton containers. This inventory is obsolete, and its continued storage and deterioration with age presents increasing risk to neighboring communities. The Army recently updated the risk analysis that supported the Final Programmatic Environmental Impact Statement (FPEIS), and the results from this update indicate that continued storage continues to pose a much greater risk to the public than that from disposal processing . . . .
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> [The Phase I report] used detailed, site-specific data to examine the suitability of on-site disposal of agents and munitions stored at [Pine Bluff]. No new or unique information was found that would alter or contradict the conclusions of the FPEIS . . . .
>
> The Army issued a Draft Pine Bluff Chemical Agent Disposal Facility (PBCDF) EIS for public review and comment in May 1995. In October 1996 the Army issued a Final EIS containing public comments and Army responses to those comments. Since that date additional analyses were conducted and included in a revision to the Final EIS. The Revised Final EIS includes specific revisions and supplemental information about an existing hazardous waste incinerator at [Pine Bluff], updates to background air quality measurements, and provides further analyses of human health risks and ecological risks associated with cumulative routine operations of the planned disposal facility and the existing incinerator. . . .
>
> The Revised Final EIS does . . . examine the developments of alternative technologies since 1988, to include the most recent evaluations performed by the National Research Council. Alternative technologies are being considered for bulk sites only.

> The alternative technologies have still neither demonstrated the ability to destroy both chemical agents and explosive components (assembled chemical munitions), nor have they been tested and proven safe in full-scale operations . . . .
>
> The analysis supports the conclusion that dioxin or furan emissions during operations will be below the levels of concern established by the U.S. Environmental Protection Agency and approved by the State of Arkansas. Some residues from facility operations will contain non-agent hazardous constituents. These wastes would be analyzed to ensure the absence of agent before being packaged and transported for disposal at permitted waste facilities.

Disposal of Chem. Agents and Munitions Stored at Pine Bluff, EIS, ROD (July 9, 1997) AR Doc. 30 ("AR Doc. 30") at 1-4. As with the Umatilla, Oregon site, the operations at Pine Bluff likewise have undergone review, and revised EIS statements have been prepared and made available for public review and comment. As with the previous three Challenged Sites, in 1997 the Army:

> determined (with assistance from and concurrence of the U.S. Fish and Wildlife Service) that routine operations will not likely jeopardize threatened or endangered species from the on-site incineration of chemical agents at [Pine Bluff]. To ensure the protection of listed species, the Army used the best available scientific and commercial data to analyze the potential harmful effects of chemical emissions during daily operations of the facility . . . .

AR Doc. 30 at 3-4. In other words, for Pine Bluff the Army made available for public review and comment a draft EIS of the incineration project, considered new developments and drafted revisions to the site-specific EIS report and utilized the "best available" information to conclude that emissions levels would be "below the levels of concern established by the U.S. Environmental Protection Agency and approved by the State of Arkansas." AR Doc. 30 at 4.

To summarize the features common to each of the four Challenged Sites' site-specific EIS reports and subsequent RODs, reviews conducted at each location considered up to six alternatives to on-site incineration and concluded that no alternative showed the ability to safely and successfully destroy the large amount of chemical agent present at each location. Each ROD chronicles the testing that went into each facility's reassessment, the consideration of alternative technologies, the environmental impacts of continued incineration and the Army's adopted measures to mitigate and minimize the likelihood of any environmental impacts resulting from incineration. In each of these Final EIS reports, the Army concluded that "selection of on-site incineration was warranted in terms of environment, safety and public health for each of these sites as well as for the surrounding communities." Defs.' Mem. 10. Although it reached this conclusion at the four Challenged Sites, the Army decided to implement alternatives to incineration at the other four (non-challenged) sites.[8]

V. Records of Environmental Consideration

Following the 1988 Final EIS, the Army reviewed and reevaluated its decision to use incineration at the four Challenged Sites. *See, e.g.* AR Doc. 11 at 2 ("As part of a continuing

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[8] *See* Pilot Testing of Neutralization/Biotreatment of Mustard Agent at Aberdeen Proving Ground, Maryland, Environmental Impact Statement, ROD (Sept. 14, 1998), AR Doc. 8 at 1; Pilot Testing of Neutralization/Supercritical Water Oxidation of VX Agent at Newport Chem. Depot, Indiana, Environmental Impact Statement, ROD (Feb. 3, 1999), AR Doc. 27 at 1; ROD, Chem. Stockpile Disposal Project Destruction of the Chem. Agents and Munitions Stored at Pueblo Chem. Depot, Colorado (July 18, 2002), AR Doc. 35 at 1; ROD, Chem. Stockpile Disposal Project, Destruction of Chem. Agents and Munitions Stored at Blue Grass Army Depot, Kentucky (Feb. 23, 2007), AR Doc. 17 at 1.

process to periodically analyze the potential environmental impacts of on going [chemical weapon destruction] actions at the individual chemical stockpile sites to determine whether the underlying NEPA documentation needs to be supplemented, the Army has prepared the *Anniston Chemical Agent Disposal Facility (ANCDF) Review and Evaluation of Information for Updating the 1991 Final Environmental. Impact Statement*. This document presents the analyses of information and data that have become available following the publication of the 1991 [Anniston facility] EIS."). The first reevaluation occurred in 1996, when the Army prepared a Record of Environmental Consideration ("REC") for the Tooele, Utah and Anniston, Alabama sites to analyze whether certain new information altered the analysis and conclusions reached in earlier EISs. *See* AR Doc. 11; Chem. Stockpile Disposal Program, Chem. Agent and Munitions Disposal Operations at Tooele, Utah, 2003 REC (Feb. 13, 2003), AR Doc. 39 ("AR Doc. 39"); Chem. Stockpile Disposal Project, Chem. Agents and Munitions Disposal Operations, Tooele, Utah (May 1999), AR Doc. 42 ("AR Doc. 42"); Chem. Stockpile Disposal Project, Chem. Agents and Munitions Disposal Operations, Tooele, Utah (July 12, 1996), AR Doc. 43 ("AR Doc. 43"); Pls.' Mem 5. The 1996 REC reviewed the then most current information related to, among other areas of concern,[9] "dioxins, alternative technologies, and health risk assessments." Defs.' Mem. 10-11. The Army concluded that none of the information altered its analysis in earlier EISs and that incineration remained the preferred method of disposal for the four Challenged Sites.

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[9] For example, in the 1996 REC, the Army responds to three areas of public concern: internal release of chemical agent, false-positive monitoring alarms and faulty monitors. AR Doc. 43 at 2-3.

By June 2003, the Army completed four more RECs, each confirming that no alternative technology existed that would be safer and more effective to dispose of the chemical agents in stockpiles contained in ton containers, as well as projectiles, mines and rockets. *See* AR Docs. 11 (June 2003); 39 (Feb. 2003); Chem. Stockpile Disposal Project, Chem. Agents and Munitions Treatment at Tooele, REC (Aug. 26, 2002), AR Doc. 40 ("AR Doc. 40"); 42 (May 1999). As a result, the Army concluded that the new information does not rise "to the level of significance that would require supplementation of the EIS." AR Doc. 42 at 3.

VI. The Assembled Chemical Weapons Assessment Program

In 1996, Congress enacted Public Law 104-121, which directed the Department of Defense:

> to conduct an assessment of alternative destruction technologies and processes other than incineration that could be used for destroying the lethal chemical agents associated with assembled chemical weapons . . . . [T]he assessment [was to] be conducted by a program manager not associated with the [Program Manager for Chemical Demilitarization]. Additionally . . . , the new program manager was required to identify and demonstrate no fewer than two alternatives to the incineration process for destroying assembled chemical munitions.

AR Doc. 11 at B-5 to B-6; *see* H.R. Rep. 99-81, at 480, 99th Cong. (1985) ("[T]estimony before the committee underscored the increasing importance to the United States of making progress toward the goal of eliminating, or at a minimum reducing, the growing threat of chemical warfare . . . . Progress on achieving the objective of avoiding chemical warfare requires a two-pronged approach aimed at progress in arms control negotiations to ban chemical weapons and,

at the same time, ensuring that the United States possesses a credible military deterrent . . . .”). In light of Congress’s warning of the “growing threat of chemical warfare,” the Army developed the Assembled Chemical Weapons Assessment (“ACWA”) program to find readily available alternative destruction technologies that could be used to destroy chemical weapons containing both chemical agents and explosive/propellant material. AR Doc. 11 at B-5 to B-8.

Defendants explain that the Army eliminated the Umatilla, Oregon and Tooele, Utah sites from consideration in the ACWA program because the two sites would not serve the intended purpose and goal of the program: to test alternative destruction technologies that could be used for destroying assembled chemical munitions and to assess the application of any potential technology to the eight stockpile sites. *See* Defs.’ Mem. 12. The Army concluded that these two sites would not serve ACWA’s goals, because the earliest date to commence pilot tests of the alternative technology would have been January 2006. *See* Final EIS, Design, Construction and Operation of One or More Pilot Test Facilities for Assembled Chem. Weapons Destruction Technologies at One or More Sites (Apr. 2002), AR Doc 54 (“AR Doc. 54") at 2-3. Defendants further explained that the Army thus excluded the Oregon and Utah sites because most, if not all, of the assembled chemical weapons at these two locations were to be destroyed before this anticipated start date for pilot testing. *See* Defs.’ Mem. 12; AR Doc. 54 at 2–3 to 2–4.

STANDARD OF REVIEW

Summary judgment is appropriate “if the pleadings, the discovery and disclosure materials on file, and any affidavits, show that there is no genuine issue as to any material fact

and that the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(c). On a motion for summary judgment, "[w]here the record taken as a whole could not lead a rational trier of fact to find for the nonmoving party, there is no genuine issue for trial." *Matsushita Elec. Indus. v. Zenith Radio Corp*., 475 U.S. 574, 587 (1986) (quotation and citation omitted).

The APA directs judicial review of challenges to NEPA. For such challenges to a governmental agency, a reviewing court may only set aside agency actions, findings, or conclusions when they are "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law . . . ." 5 U.S.C. § 706(2)(A).

Review under the APA is highly deferential, but while this standard does not shield agency decisions from in-depth judicial review, the scope of review is narrow and the court "is not to substitute its judgment for that of the agency." *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) ("*State Farm*"); *see Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 415-416 (1971), *abrogated on other grounds by Califano v. Sanders*, 430 U.S. 99, 97 (1977) ("*Overton Park*"). In sum, the court must consider whether the agency's actions exceed the bounds of its statutory authority or were based on a clear error of judgment. *See Overton Park*, 401 U.S. at 416.

DISCUSSION

Plaintiffs argue that defendants violated NEPA by failing to: (1) prepare supplemental programmatic and site-specific EISs for the four Challenged Sites after new information became

available; and (2) include certain sites in its NEPA analyses.[10] *See* Pls.' Mem. 2.

I. Whether There Is Significant New Information That Requires the Army to Prepare Supplemental Programmatic and Site-specific EIS Reports

Plaintiffs insist that "the information regarding and circumstances [a]ffecting the Army's incineration program [have] radically changed and significant new information bearing on the environmental impact of the Army's incineration facilities has been developed." Pls.' Mem. 15. Plaintiffs rely on the defendants' own site-specific tests and expert opinions contained in the administrative record as evidence that alternative technologies both exist and are capable of destroying the chemical weapons stockpile. *See* Pls.' Mem. 15 ("Defendants acknowledge the validity and significance of the alternative technologies through their evaluation and adoption of these alternatives for the Colorado, Indiana, Kentucky, and Maryland chemical weapons sites."). Plaintiffs assert that new information reveals that the toxicity of the agents, the exposure pathway for the chemicals and risks associated with exposure levels have changed since the original EISs were conducted, rendering the original Final EIS outdated. *See* Pls.' Mem. 17.

Plaintiffs further argue that defendants have failed to assess the impact of incineration of munitions, such as mustard agents, containing mercury: "No public NEPA process has been employed to address the disposal of mercury contaminated agent . . . ." Pls.' Suppl. Mem. 20. Plaintiffs also suggest that defendants have failed to assess "in a public NEPA process, the significant agent monitoring problems experienced at its facilities . . . ." Pls.' Suppl. Mem. 18.

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[10] Specifically, plaintiffs argue that "no hard look regarding alternatives has been completed for the [Umatilla] Oregon and [Tooele] Utah sites, and insufficient consideration has been completed for the [Anniston] Alabama and [Pine Bluff] Arkansas sites." Pls.' Mem. 23.

Finally, plaintiffs argue that modifications to the incineration system, specifically, the impact of the removal of the dunnage incinerator,[11] creates "a serious question about how contaminated carbon, protective clothing, and other hazardous wastes will be treated." Pls.' Suppl. Mem. 20 (citation omitted). For all of these reasons, plaintiffs argue for a supplemental EIS ("SEIS").

In addition, plaintiffs claim that by using alternative technology at the four non-incineration sites, defendants have significantly changed their programmatic view of how best to deal with chemical warfare agent destruction, and that this selection of non-incineration technologies for four of the eight stockpile sites, "constitute[s] an admission by the [d]efendants that alternatives to incineration are significant and available." Pls.' Mem. 18-19. Plaintiffs argue, for example, that neutralization has proved to be an effective non-incineration alternative at the Aberdeen, Maryland site. *See* Pls.' Suppl. Mem. 20.

Defendants respond to plaintiffs' claims that new information exists regarding toxicity of certain chemical agents by arguing that these claims are unsupported by the administrative record. In response to plaintiffs' allegations that the Army's assessment of health risks posed by chemicals such as dioxans and furans at the Tooele, Utah and Anniston, Alabama sites was not thorough and, thus, supplemental analysis is required, defendants assert that "these same claims were dismissed by the district court and Tenth Circuit when [p]laintiffs challenged the use of incineration at the Tooele, Utah facility. [T]he court concluded that the Army adequately analyzed the impacts of dioxins, furans, and other particulate matter and, therefore, the

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[11] "Combustible scrap" was to be fed to the dunnage incinerator. Pine Bluff Chem. Agent Disposal Facility: Review and Evaluation of Info. for Updating the 1997 Revised Final EIS (Jan. 2005), AR Doc. D-8 at 2-2, 2-3.

[p]laintiffs' claims had no merit." Reply Mem. Supp. Defs.' Mot. Summ. J., Docket No. [32], ("Defs.' Reply Mem.") 13 (citations omitted). As to the mercury resulting from mustard incineration, defendant-intervenor further argues that the issue of mercury in munitions and storage containers at the Tooele facility is not considered "significant" such that a SEIS is warranted, and further notes that the mercury issue has already undergone extensive review by the Army. EG&G's Suppl. Mem. 2.

In terms of plaintiffs' claim that the Army "significantly changed their programmatic view" by selecting non-incineration technologies at four of the eight sites thus constituting an "admission . . . that alternatives to incineration are significant and available," defendants respond that "[n]o alternative technology has yet proven successful in destroying the entire inventory of chemical weapons" and that "there is no rational reason to employ a second technology at an astronomical cost to the American public when the preferred technology can destroy the entire inventory . . . ." Defs.' Reply Mem. 20. Defendants contest plaintiffs' argument concerning the effectiveness of non-incineration alternatives to destroy the nation's chemical weapons stockpile, exemplified by the use of neutralization at the Aberdeen site, which had bulk storage of chemical agents as distinct from munitions. Defendants note that alternative technologies, such as neutralization, have not yet been "proven successful in destroying assembled chemical weapons" containing energetics and/or propellants, such as those stored at Pine Bluff, Arkansas and Umatilla, Oregon. Defs.' Suppl. Mem. 36-37.

Moreover, defendants note that the monitoring systems currently employed to detect the presence of chemical agent have been found effective and that this has been confirmed by the

Army's expert and independently by the NRC's Committee on Monitoring at Chemical Agent Disposal Facilities. Defs.' Suppl. Mem. 24-25. Further, defendants note that they properly considered the impact from removal of the dunnage incinerator and "employed a superior destruction system that was protective of workers and the public, and received independent verification and approval of this action by the appropriate state department of environmental quality." Defs.' Suppl. Mem. 34.

The court finds that plaintiffs have failed to demonstrate that there is significant new information requiring the Army to prepare supplemental programmatic and site-specific EIS reports. Specifically, the court finds that plaintiffs have failed to demonstrate that alternatives to incineration are readily available and capable of destroying the quantity and type of chemical warfare agents and munitions at the Challenged Sites. Moreover, the court finds plaintiffs have failed to demonstrate that alternative technology would create environmental impacts significantly different from the impacts associated with incineration that were addressed in the Army's original programmatic Final EIS report. Further, upon examination of the administrative record and the Army's Final EIS report, the court does not agree with plaintiffs' claim that the RECs were not thorough because the studies performed at Tooele, Utah and Anniston, Alabama did not address dioxins, furans, or mercury. Plaintiffs have likewise failed to demonstrate that there is a significant change or new information that has not been considered regarding the effectiveness of the agent monitoring process or the removal of the dunnage incinerator.

In evaluating an agency's decision not to prepare a supplemental EIS, courts employ a two-step inquiry. *Hughes River Watershed Conservancy v. Glickman*, 81 F.3d 437, 443 (4th Cir.

1996) ("*Glickman*"); *see also Marsh*, 490 U.S. at 374, 385; *Village of Grand View v. Skinner,* 947 F.2d 651, 657 (2d Cir. 1991)*; Headwaters, Inc. v. Bureau of Land Management*, 914 F.2d 1174, 1177 (9th Cir. 1990). First, the court must evaluate "whether the agency took a hard look at the proffered new information." *Glickman*, 81 F.3d at 443. Next, if the agency did take a hard look, the court must then "determine whether the agency's decision not to prepare a supplemental EIS was arbitrary or capricious." *Id.*

A. Whether Defendants Took a "Hard Look" at New Information in Deciding Not to Prepare a Supplemental EIS Report

When applying the hard look test, courts may consider whether the agency "obtains opinions from its own experts, obtains opinions from experts outside the agency, gives careful scientific scrutiny and responds to all legitimate concerns that are raised." *Hughes River Watershed Conservancy v. Johnson*, 165 F.3d 283, 288 (4th Cir. 1999) ("*Johnson*") (citing *Marsh*, 490 U.S. at 378-85). If the agency does take a hard look at new information and concludes the information is insignificant, the agency should provide a reasoned explanation for this conclusion. *Sabine River Authority v. Dep't of Interior*, 951 F.2d 669, 678 (5th Cir. 1992) ("*Sabine River*") (claiming that agencies, particularly those dealing with technical and scientific matters, are entitled to rely on the views of their own experts, "so long as the experts are qualified and express a reasonable opinion.").

The court finds that the Army took the requisite "hard look" at the available new information in making its decision to not prepare a supplemental EIS for the four Challenged Sites. First, the Army was authorized to proceed with incineration only after certifying its results

to the Secretary of Defense and subsequently to Congress that incineration operations at Johnston Atoll had been successful. *See* Defs.' Mem. 8. The NRC's findings that incineration testing had been successfully completed, combined with subsequent tests from both within and outside the agency, lead the court to conclude that the Army's certification of its results through the opinions of its own experts, as well as opinions from experts outside the agency, satisfied the hard look requirement. *See Johnson*, 165 F.3d at 288. The Tooele REC describes the independent assessments:

> [The MITRE Corporation assessment] cites the following: "[Johnston Atoll] met the OVT safety performance goals that were established for it. As expected, there were no injuries or fatalities arising from the processing of agent or munitions . . . ."
>
> The Henry L. Stimson Center, a nonprofit, nonpartisan institution devoted to public policy research, published a report on the U.S. Chemical Weapons Destruction Program in 1994. This report cites that the U.S. Army's monitoring levels for nerve agents is 21,000 times stricter than what would be required federally and about 210 times stricter than the tougher emissions standards requested by some states. For mustard the Army's monitoring levels are 415 times stricter than the federal requirement and four times stricter than the more rigorous state emissions standard. In addition, the Army's incinerators have hundreds more operational checkpoint and safeguards than federal regulations require and these extra alarms give the Army ample information about the incinerator[']s operation to enable appropriate adjustments to be made to maintain the highest level of combustion efficiency.

AR Doc. 43 at 10-11. Even following the Army's plan at the Aberdeen, Maryland facility to speed up chemical agent destruction in light of the President's declaration of a national emergency in the wake of the September 11, 2001 terrorist attacks, the "accelerated destruction plan was studied in an Environmental Assessment (EA) published in May 2002. The Maryland

Department of the Environment determined that this accelerated plan protects public health and the environment and is in the best interest of the citizens of Maryland." AR Doc. 11 at B-4 (citations omitted).

Second, the record reveals that defendants gave "careful scientific scrutiny" to the risks associated with their chemical agents and munition demolition facilities and that the defendants responded to all legitimate concerns raised by the public. Despite the plaintiffs' contentions, the record demonstrates that, immediately following the 1988 Final EIS and continuing up to and including the most recent 2003 assessment, the Army reviewed and analyzed alternative technologies, past experiences with incineration, independent review of the Army's incineration experience, dioxins and furans, and ecological studies and risk assessments. *See, e.g.,* AR Doc. 11; AR Doc. 39; AR Doc. 40; AR Doc. 42. For each of the site-specific EISs, defendants provide convincing evidence that the Army considered "recent and detailed data" and, in weighing the alternatives, decided to continue the chemical agent disposal program with incineration as the preferred method. *See supra* Part IV. These conclusions, moreover, were corroborated by outside experts; for example, the Army's test site, Johnston Atoll, was verified by a series of successful OVTs and was evaluated and approved by the NRC in 1994:

> [A]lthough the Johnston Island facility did experience numerous problems during OVT, the Stockpile Committee did not see any "show stoppers". . . . The NRC also stated that no such system can be completely designed without problems, and the baseline system has been properly designed with multiple levels of safety to contain problems before they become hazards to the workers or surrounding communities . . . . The extensive [Johnston Atoll] operational experience has proven that the baseline incineration program effectively disposes of chemical agent and munitions in a safe and environmentally protective manner. [It] has destroyed over 2

> millions [sic] pounds of lethal chemical agent in its six years of operation . . . . Accordingly, [the Johnston Atoll] operational experience has not created new and significant circumstances or information indicating [Tooele, Utah] operations would create significant environmental effects beyond those previously contemplated in the [Final EIS] or [Tooele, Utah] Site-Specific [EIS].

AR Doc. 43 at 10, 12-13 (citations omitted). Incorporating the NRC's recommendations into the Tooele, Utah facility, the NRC in turn reviewed this facility in 1996 and concluded that "[t]he detected products of incomplete combustion, both volatile and semivolatile, were similar to those observed during the burning of fuel oil alone. Total dioxin/furan levels were extremely low, well below the U.S. standard or municipal waste incinerators." Defs.' Mem. 31 (quoting AR Doc. 43 at 10, 12, and 16).

Moreover, since the original 1988 Final EIS report and first OVT in 1990, the Army has examined new information regarding the risks posed by incineration of chemical agents to the environment and public safety on four separate occasions. The Army completed four RECs: three at Tooele, Utah in 1999, 2002 and 2003, and one at the Anniston, Alabama facility in June 2003"on the comparative impacts of alternative technologies and incineration. Defs.' Reply Mem. 13-15. The Army determined that "[w]ithout significant differences in impacts from either technology, and without a proven alternative to destroy assembled chemical weapons . . . there is no rational reason to employ a second technology at an astronomical cost to the American public when the preferred technology can destroy the entire inventory of chemical weapons stockpiled at these sites." Defs.' Reply Mem. 20. For example, during the June 2003 review of the emissions anticipated from the Anniston facility, the assessment focused on "human health risks that might result from the 'worst case' stack emissions, and the technical

approach is designed to produce conservative estimates of human health risk . . . . The worst-case emissions data used . . . are considered to be a 'gross overestimate' of the actual emissions." AR Doc. 11 at 3-11 and 3-13. The results of this human health risk assessment for Anniston:

> [S]ubstantiate the findings of the 1991 Anniston EIS that air emissions during operation of the [Anniston facility] would be unlikely to have adverse impacts on human health. Furthermore, human health risk assessments prepared for the Army's other incineration facilities also support this finding. Therefore, the new data and analyses presented in this section provide no new information in regard to human health effects that would require supplementation of the 1991 Anniston EIS.

AR Doc. 11 at 3-15 (citations omitted). Thus, the Army both evaluated incineration at the time it was adopted as the preferred disposal method and has monitored the performance of the method since then. Finally, as to plaintiffs' central point, the Army has prepared an EIS for the ACWA program to comply with Public Law 104-201, which directs the Army to conduct an assessment of alternative chemical agent destruction technologies and processes other than incineration of assembled chemical weapons. *See* AR Doc. 11 at B–5 to B–12. These findings, discussed previously, together with internal and external expert opinions obtained and reviewed by the Army, lead the court to conclude that the defendants fulfilled the first prong of the two-part inquiry under *Glickman*.

In addition, throughout the defendants' testing and reevaluation process, the Army provided a reasoned explanation for its decision not to prepare a supplemental EIS. In the 1988 Final EIS, for instance, the Army studied four alternatives in detail:

> The technology and location alternatives were evaluated for, among other considerations, public safety and health impacts, technological complexity, public opinion, and compatibility with

> legislative policy. The Army studied and rejected the technologies other than incineration on numerous other grounds, including the following: (1) pyrolytic thermal processing could produce noxious products; (2) chemical neutralization produces large quantities of organic wastes and creates difficulties in treating the resulting hazardous waste; (3) nuclear detonations had too many unexplored aspects of an obviously serious nature; and (4) cryofracture was still in the research and developmental stage and required additional prove-out operations.

Defs.' Mem. 6-7 (citing AR Doc. 1 at 5-6 and AR Doc. 2 at 2-78 and 2-88). Because none of these alternative technologies was shown to destroy successfully a large chemical weapon stockpile similar to the ones that exist in the eight incineration sites, the Army concluded that these alternatives were either "immature or unreliable" and that the new information was not significant. Defs.' Mem. 6-7; *see* AR Doc. 11 at 2–22. The Army has continued to consider alternative technologies. The 2003 REC points out the similarities of potential environmental and human health risks posed by alternatives to incineration:

> From an environmental perspective, the proposed non-incineration technologies have many similarities to the Army's operational incineration facilities: they both consume resources (e.g. electric power, water, chemicals), generate wastes, and emit air pollutants. The ACWA technologies require significant amounts of water to support the chemical neutralization processes. The wastes generated by these facilities might need to be classified as "hazardous." The projected air emissions from these facilities would include dioxins and furans . . . as well as heavy metals . . . . Data from the ACWA program indicate that up to 1.47 x 10^-6 lb/hr of dioxins and furans might be emitted from the neutralization of agent and energetics followed by on-site biotreatment at the Pueblo facility. Emissions of particulate matter from the [selected neutralization technology] may also pose a problem in regard to site-specific air quality standards . . . .
>
> Other potential environmental impacts of the non-incineration alternatives have been identified and evaluated by the ACWA

> program . . . [which] evaluated potential environmental impacts in the following topical areas: land use, infrastructure, waste management, air quality, noise, human health and safety, visual resources, geology and soils, water use and quality, biological resources, cultural resources, socioeconomics, environmental justice, agriculture, accidents, and cumulative effects. The ACWA analysis assumed a full-sized pilot-test facility comparable to the incineration facility that has already been constructed at Anniston. The ACWA study concluded that none of the alternative technologies, as evaluated for Anniston, would have a significant effect on the human environment.

AR Doc. 11 at 2–21 to 2-22 (citations omitted). As for comparing the overall environmental impacts of incineration directly with non-incineration alternative technologies, the administrative record shows:

> [o]nly two studies [one at Pueblo, Colorado in 2002, the other in Blue Grass, Kentucky in 2003] have conducted comparative evaluations of the environmental impacts from incineration and from the non-incineration alternative technologies . . . . These two studies concluded that the potential environmental impacts from one of the ACWA, non-incineration technologies would not be significantly different than the impacts from one of the Army's incineration facilities.

AR Doc. 11 at 2-22. Following these comparisons, the June 2003 study concluded that:

> While the alternative technologies under consideration for [Blue Grass, Kentucky] would be applicable to the chemical weapons stored at [Anniston, Alabama] . . . the facilities proposed for construction . . . have not yet been tested at full-scale . . . . The non-incineration alternative processes . . . might also prove to be capable of destroying the [Anniston, Alabama] inventory. However, any of the alternative technology processes would be expected to require lengthy periods of systemization and prove-out before the actual destruction of chemical weapons could begin. Thus, at this time, there is insufficient information to conclude that non-incineration technologies would be superior to the Army's incineration process at Anniston.

AR Doc. 11 at 2-22.

In other words, the Army's initial 1988 Final EIS rejected four proposed alternatives to incineration based on environmental and safety concerns, concluding alternatives were either not ready or not reliable. The 2003 Anniston REC concluded that the environmental consequences of the proposed non-incineration technologies "have many similarities" to the impacts from incineration and that none of the alternative technologies, if implemented, offered any positive change or "significant effect on the human environment." AR Doc. 11 at 2-21 to 2-22. This REC, moreover, emphasizes the lengthy testing process still needed before any of the non-incineration technologies could be implemented, concluding that there is not enough information to deem any alternative technology as superior to incineration. AR Doc. 11 at 2-22.

Furthermore, the chemical agents at the incineration sites are held mostly in weaponized form, in rockets and mines, and in other delivery devices; the chemical agents at the non-incineration sites, on the other hand, are generally held in drums and bulk containers which are therefore much easier to dispose of since there is no "energetic" or other explosives involved. *See* AR Doc. 11 at B–3 to B–5. For instance, two of the non-incineration sites, Aberdeen and Newport, "store only bulk agent inside steel tanks, known as 'ton containers,' which do not contain any explosive components." AR Doc. 11 at B-3. While destruction of chemical agents at these facilities can be accomplished by "[n]eutralization of agent HD with hot water followed by biodegradation . . . [and] neutralization of agent VX with hot caustic (sodium hydroxide) followed by post-treatment" such is not the case for the four Challenged Sites where rockets, mines and other explosives present more difficult obstacles. AR Doc. 11 at B-3.

Plaintiffs assert that defendants violated NEPA by not taking a "hard look" at "new information;" that the Army has made "no analyses based on current facts . . . describing, for example, the impact of all proposed incinerator sites on the food chain, ecosystems, public health or air quality." Pls.' Mem. 21-22. Plaintiffs, however, fail to support this claim of "significant new information" with any factual evidence. Indeed, it is evident that the Army has taken a "hard look" at these non-incineration technologies.

As to plaintiffs' concerns regarding destruction of agents containing mercury, defendant-intervenors, the operators of the Tooele facility, have shown that the mercury issue is not "significant" as that term requires an SEIS and that this issue has been extensively reviewed by the Army. *See Marsh*, 490 U.S. at 374. First, the Army established a protocol to identify high–mercury agents that must be destroyed with "modifications . . . to the facility to provide mercury abatement," all done with oversight by the EPA and by Utah's state environmental agencies. *See* EG&G's Suppl. Mem. 4-6. The Army also conducted an environmental assessment of its plan to control the mercury emissions by modifying the facility, and this environmental assessment, following public comment, resulted in a draft Finding of No Significant Impact ("FONSI")[12] on March 15, 2007 and a final FONSI on September 20, 2007. EG&G's Suppl. Mem. 8. The FONSI determined that "'an environmental impact statement will not be prepared' because the proposed solutions to the mercury issue will result in no significant environmental impacts." EG&G's Suppl. Mem. 8 (citation omitted).

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[12] The FONSI is "a document by a Federal Agency briefly presenting the reasons why an action, not otherwise excluded (§ 1508.4), will not have a significant effect on the human environment and for which an environmental impact statement therefore will not be prepared." 40 C.F.R. § 1508.13.

Next, regarding plaintiffs' claims that there have been significant agent monitoring problems experienced in the facilities, the administrative record confirms the effectiveness of the monitoring systems being used. The Army monitors airborne chemical agents at low levels. NRC, Monitoring at Chem. Agent Disposal Facilities (2005), AR Doc. D-86 ("AR Doc. D-86") at 1. The monitoring systems employed to detect the presence of chemical agent, the Automatic Continuous Air Monitoring System ("ACAMS"), the Miniature Chemical Agent Monitoring System ("MINICAMS") and the Depot Area Air Monitoring System ("DAAMS"), have been independently reviewed by the NRC's Committee on Monitoring at Chemical Agent Disposal Facilities. *See* AR Doc. D-86. The NRC confirmed the reliability of ACAMS, MINICAMS, and DAAMS "to provide sufficient airborne agent monitoring capability to afford adequate protection to workers, the general public, and the environment," and concluded that the monitoring system supported by plaintiffs, the OP-FTIR spectrometry system "is not likely to be effective because of the low sensitivity of this technique." AR Doc. D-86 at 74-76. Plaintiffs simply cannot demonstrate that the Army failed to analyze the effectiveness of the monitoring systems or that a supplemental analysis is required to reassess the systems.

Finally, plaintiffs fail to support their claim that new information regarding the removal of the dunnage incinerator requires a supplemental analysis. Despite plaintiffs' contentions, after the issuance of Resource Conservation and Recovery Act ("RCRA") permits for the incineration facilities, the Army "continued to evaluate technologies and lessons learned to analyze other methods besides the Dunnage Incinerator for disposing of secondary waste produced from chemical agent storage and disposal activities." Defs.' Suppl. Br. 34 (citing Umatilla Chem.

Agent Disposal Facility (UMDCF) Secondary Waste Best Available Tech. (BAT) Data Package (Aug. 3, 2007), AR Doc. D-85 ("AR Doc. D-85") at 1). After determining that modifications would be beneficial to treat secondary wastes, the Army requested and received approval for the modification from each state's environmental quality department pursuant to the RCRA permitting process. Defs.' Suppl. Mem. 34. The administrative record demonstrates that the Army considered the impact of removing the dunnage incinerator, employed an improved destruction system, and received independent verification and approval of its actions from each state's department of environmental quality. *See* Pine Bluff Chem. Agent Disposal Facility: Review and Evaluation of Info. for Updating the 1997 Revised Final EIS (Jan. 2005), AR Doc. D-8 ("AR Doc. D-8") at 2-3; Class 3 RCRA Permit Modification Sign-Off Sheet Issued by Arkansas Dep't of Envtl. Quality (Feb. 27, 2003), AR Doc. D-48 ("AR Doc. D-48"); Letter from Dir. Utah Dep't Envtl. Quality (Nov. 30, 2005), AR Doc. D-58 ("AR Doc. D-58") (regarding physical removal of the dunnage incinerator); Mem. from U.S. Army Center for Health Promotion and Preventive Medicine (Jan. 12, 2000), AR Doc. D-74 ("AR Doc. D-74") (regarding submittal of Umatilla dunnage incinerator removal health impact evaluation); Class 2 Permit Modification Request (May 2002), AR Doc. D-75 ("AR Doc. D-75") (submitted to Oregon Dept. Environmental Quality); Mem. from U.S. Army Chem. Materials Agency (Aug. 3, 2007), AR Doc. D-85 ("AR Doc. D-85") (regarding Umatilla Hazardous Waste Permit). Accordingly, plaintiffs have failed to demonstrate that the removal of the dunnage incinerator requires a SEIS.

In sum, plaintiffs provide no evidence of "new information." The court finds that the

Army has provided a reasoned explanation for its conclusion that the information is insignificant. *See Sabine River*, 951 F. 2d at 678.

B. Whether the Army's Decision Not To Provide A Supplemental EIS was Arbitrary or Capricious

The court next reviews the second requirement set by the APA that the Army's decision not to prepare a supplemental EIS was not "arbitrary or capricious."

When reviewing an agency's decision to determine if that conclusion was arbitrary or capricious, the scope of the court's review is narrow. *Johnson*, 165 F.3d at 287. Although review must be "searching and careful," the court must not substitute its own judgment for that of the agency. *Id.* Furthermore, considering the necessity of the Army's chemical munitions demolition program to promote public safety and national security,[13] and "[r]esolving these issues requires a high level of technical expertise and is properly left to the informed discretion of the responsible federal agencies." *Kleppe v. Sierra Club*, 427 U.S. 390, 412 (1976); *see also Baltimore Gas & Elec. Co. v. Natural Res. Def. Council, Inc.*, 462 U.S. 87, 103 (1983) ("When examining this kind of scientific determination . . . a reviewing court must generally be at its most deferential.") (citations omitted).

The court finds that defendants did not act arbitrarily or capriciously in deciding not to provide a supplemental EIS. Since publishing the original Final EIS, the Army has evaluated

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[13] *See* Defs.' Mem. 4 (listing the significant hazards associated with continued storage of the chemical weapons, including: sensitivity to catastrophic, natural events; the potential of leakage due to the stockpiles' aging and corrosion; and the threat the stockpile poses for terrorist acts).

incineration and alternative technologies for, among other considerations, public safety, environmental impact and feasibility. *See* AR Doc. 11 at B9–B10. To support this assertion defendants provided a detailed history of the Army's human health and environmental risk assessments for the challenged incineration sites.

First, the Army's initial Final EIS, which outlined the entire chemical warfare agent destruction program, concluded that no significant impacts would be expected from normal disposal operations. *See* AR Doc. 2 at xiv to xv. The Army initially speculated that any environmental impact would come from plant emissions, the transport of chemical agents to and from the facilities and solid wastes generated from incineration; however, with these three concerns in mind, the Army concluded that:

> None of these were found to result in an unmitigable impact at the individual sites, nor were the differences between sites found to be of overriding concern. Specifically, stack emissions of chemical agents would be controlled to levels at or below regulatory requirements. Upon exiting the stacks, these emissions would be reduced significantly (by dilution with ambient air) before reaching off-site locations . . . . Therefore, under normal conditions, no impact from transportation would be expected . . . . Disposal plant workers would be afforded maximum protection through various facility design features . . . . Thus, it is concluded that the environmental impacts of normal plant operations would be both minimal and mitigable and would not be significant among program alternatives.

AR Doc. 2 at xiv. Second, the Johnston Atoll testing facility OVTs revealed that detected products "were similar to those observed during the burning of fuel alone," that dioxan and furan levels were "well below the U.S. standard," and that detected levels for trace organics "were well below levels of regulatory concern," demonstrating that the baseline incineration program

effectively disposes of chemical agent and munitions in a safe and environmentally protective manner. Defs.' Mem. 31 (quoting AR Doc. 43 at 10, 12, and 16). Third, the Army then issued site-specific draft EISs and shortly thereafter published Final EISs for the four incineration sites challenged by the plaintiffs. *See supra* Part IV.

Finally, following the successful completion of the site-specific EISs for the four Challenged Sites, the Army has further reviewed current data to see if there was any new and significant information that might change the Army's incineration course of action. Specifically, the Army reassessed environmental threats at the Tooele, Utah and Anniston, Alabama facilities, using RECs which incorporated the NRC's findings drawn from the series of OVTs conducted during 1990 to 1993. *See supra* Part IV. The OVTs performed on existing incineration operations at Johnston Atoll and Tooele, Utah in 1996 revealed that "only extremely small quantities of dioxins and furans were emitted," and that the risk assessment for total cancer are all "less than the EPA-established levels of concerns for the general public." AR Doc. 43 at 58-59. The Army concluded that any emissions resulting from incineration would not contribute significantly to background dioxin levels, would be within EPA's health risk assessment limits, and would not pose a significant health risk to the public or workers. AR Doc 11 at 3-10 to 3-11.

The Army completed four more RECs: three at Tooele, Utah in 1999, 2002 and 2003, and one at the Anniston, Alabama facility in June 2003. These documents provided an extensive review and confirmed that no alternative technologies exist to effectively dispose of chemical agents in stockpiles, projectiles, mines and rockets. *See* AR Docs. 11, 39, 40, and 42. With respect to new concerns about dioxins and furans, the Army concluded at Anniston that no

significant impacts would be expected from disposal plant emissions. *See, e.g.*, AR Doc. 11 at 3-36 to 3-37. These newer reports state that numerically computed risk values for carcinogenic and non-carcinogenic risks were "well below" EPA levels of concern and thus unlikely to have adverse impacts on human health and the environment:

> Concerns and claims about dioxin and furan emissions since the 1991 EIS was published have triggered a review of the health effects of these compounds in this report. Dioxins and similar compounds are recognized as creating a broad spectrum of possible adverse effects on human health, but there is still disagreement as to the exact nature and extent of those effects, as well as the levels of exposure that pose a significant risk. For example, while animal studies point to toxicity and carcinogenicity, human studies are inconclusive. Nevertheless, some forms of dioxin have been labeled as known carcinogens. In addition to the uncertainty about the health effects of dioxin, several studies have reached inconclusive results about the relation between environmental and body burden measurements of dioxin exposures and the proximity to incinerators that emit dioxins. That is, no correlations have been found between exposure and distance or downwind direction from the incineration.
>
> Despite the scientific confusion about the toxicity of dioxin and/or their human health effects, the emissions of dioxins and furans measured at the Army's [Johnston Atoll] and Tooele facilities were found to be extremely low, and the most toxic form of dioxin was not detected at all. The anticipated emissions of dioxins from the [Anniston facility] are conservatively estimated to result in less than a 0.2% increase in the daily dose of dioxins to the maximally exposed person. Actual doses are likely to be much less than this. Over the 7-year operational lifetime of the [Anniston facility], a 0.2% increase would result in a change in the body burden of the maximally exposed person from 5.600 ng/kg to 5.605 ng/kg. Hence, the potential for impacts from emission of dioxins at the [Anniston facility] is minimal.

AR Doc. 11 at 7-1 to 7-2. These findings, published in June 2003, led the Army to conclude at each reassessment stage that incineration does not pose a significant health risk to the public or

workers and that the risks anticipated by new information did not rise to the level of significance that requires a supplemental EIS.

Moreover, regarding destruction of agents containing mercury, the Army conducted an environmental assessment of its plan to control the mercury emissions by modifying the Tooele facility. This environmental assessment, following public comment, resulted in a draft FONSI on March 15, 2007 and a final FONSI on September 20, 2007. *See* EG&G's Suppl. Mem. 8. The FONSI determined that "an environmental impact statement will not be prepared" because the proposed solutions to the mercury issue will result in no significant adverse environmental impacts. Final Finding of No Significant Impact (Sept. 20, 2007), EG&G's Suppl. Mem. at Ex. A, p. 3.

Thus, in light of the plaintiffs' concern over the increase in dioxan levels and furans, and the release of mercury, defendants have provided evidence that there is no significant threat to human health or the surrounding environment. Although an agency should consider the public's concerns, provided the agency responds to legitimate concerns, it may rely upon its own experts in making procedural decisions. *See Johnson*, 165 F.3d at 288 ("Agencies are entitled to rely on the view of their own experts.") (citation omitted). The Army concluded, based on its own expertise as well as the opinion of outside experts, that:

> [A]ny acceptable alternative process, or combination of processes, must be capable of destroying both the chemical agents and the munitions themselves, some of which contain explosive components . . . . The NRC found no readily applicable alternative technology to incineration of energetic components for munitions configurations found in the chemical stockpile and no alternative to high-temperature treatment for reliable decontamination of metal parts. Therefore, the NRC recommended that energetic

> material be disposed of by incineration and that use of the current metal parts furnace or other high-temperature treatment is recommended for contaminated metal parts. In addition, the NRC found that there was no alternative technology available that has been adequately demonstrated to allow for replacement of the liquid incinerator . . . .
>
> [T]he proposed baseline incineration process remains the only technology currently available for destroying the inventory's full range of toxic and explosive components while complying with the international disposal deadline establish by Chemical Weapons Convention. The Army continues to monitor developments in demilitarization technology. At the present time, no alternative technology is sufficiently mature in scale or in engineered integration to replace (in part or whole) or supplement the existing and demonstrated production-scale incineration facilities at [Tooele] to treat VX. The conclusion reached in the programmatic EIC (U.S. Army 1988) and incorporated into the [Tooele] EIS (U.S. Army 1989) is therefore corroborated: "the non-incineration technologies have not yet been demonstrated to be sufficiently mature in full scale operations to adequately treat the VX stored in the variety of assembled munitions . . . . Incineration remains the best technological choice for destroying the VX munitions."

AR Doc. 39 at 3-5. This 2003 REC shows that while alternative technology may be available to demilitarize the chemical agent alone, incineration has proven the only technology to effectively destroy chemical weapons, munitions and rockets. In addition to the NRC review of incineration destruction, independent expert assessment of incineration at the Johnston Atoll and Tooele are well documented. *See supra* Part I.A.

During its ten years of operation, and as recently as 2003, the Johnston Atoll facility has demonstrated "that safe operation, environmental compliance, and adequate process performance can be expected . . . and that incineration operations at [Johnston Atoll] have more than satisfied all requirements for control of agent and toxic discharge concentrations . . . [and] the baseline

system has been demonstrated at [Johnston Atoll] as a safe and effective destruction process for the chemical stockpile." AR Doc. 11 at A–20. Despite having achieved successful results from the initial OVT at Johnston Atoll, the Army has continued to test its incineration facilities, search for alternative technologies, and consult agency and outside experts. During these reevaluations, ACWA required the Army to identify alternatives to incineration; defendants examined four alternative technologies as well as the impacts of no action. AR Doc. 11 at B-5 to B-12. Following these tests, on June 25, 2003 the Army prepared an EIS for its ACWA program ("ACWA EIS") to examine the results and concluded that:

> the environmental impacts of constructing and operating a facility using each candidate technology would be about the same as those for constructing and operating an incineration facility. At some sites, there would be difference in impacts in areas such as utility requirements, water use, human health, and socioeconomics; however, there would be no significant impacts in any of these resource categories.

AR Doc. 11 at B-8. Because there is nothing that would lead to the conclusion that there would be significantly better environmental impacts from alternative technology, the court finds the Army's decision to not prepare a supplemental EIS was neither arbitrary nor capricious.

Given this history of safety reassessment, defendants' actions cannot be said to have been based on a "clear error of judgment." *See Overton Park*, 401 U.S. at 416. Moreover, considering the incineration program's approval by the Secretary of Defense and compliance with NEPA regulations, the Army's decision not to prepare a supplemental EIS in light of the proffered new information[14] cannot be characterized as "so implausible" that such a decision

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[14] Defendants reject all of plaintiffs' claims that there is new information that (continued...)

could not be merely the product of agency expertise. *Id.*

The United States Supreme Court has held that an "agency need not supplement an EIS every time new information comes to light after the EIS is finalized." *Marsh*, 490 U.S. at 373 (footnote omitted). Indeed, "[t]o require otherwise would render agency decision making intractable, always awaiting updated information only to find the new information outdated by the time a decision is made." *Id*. (footnote omitted). The Court in *Marsh* held that reaching a decision based on a "reasoned evaluation of the relevant information" was not arbitrary or capricious. *Id*. at 385. Based on record evidence, the court finds that the Army conducted a reasoned evaluation of the effectiveness and safety of the new technology. Therefore, the Army's decision not to prepare a supplemental EIS in light of the new available technology cannot be considered arbitrary or capricious under the APA.

II. Whether the Army Violated NEPA By Not Including The Four Challenged Sites in the Testing of Potential Alternative Technologies

Having concluded that the defendants did not violate NEPA by deciding not to prepare a supplemental EIS, the court next turns to the plaintiffs' claim that defendants took new information into consideration by "selecting non-incineration technologies for four of the eight chemical warfare agent stockpile sites," thus "constitut[ing] an admission by the [d]efendants

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[14](...continued)
requires further examination in a supplemental EIS. Defendants point out the incongruities in the plaintiffs' arguments: from making claims unsupported by the administrative record to taking comments out of context from NEPA documents, and referring to dated testing procedures to conclude the Army failed to consider certain risks. *See* Defs.' Reply Mem. 11-15. Defendants also detail the results from the various stages of testing and reassessment to support their conclusion that no new supplemental EIS was needed. *See* Defs.' Reply Mem. 11-15.

that alternatives to incineration are significant and available." Pls.' Mem. 19. Plaintiffs argue that despite exploring alternative technologies at four of the eight stockpile locations, defendants have given "little or no consideration [to the four challenged incineration sites: Alabama, Arkansas, Oregon, and Utah] regarding the [potential] use of non-incineration technologies." Pls.' Mem. 19. Plaintiffs contend that the record is "devoid of any reasoned explanation for [d]efendants' failure to address new information concerning alternatives and the impacts of incineration on a programmatic level." Pls.' Mem. 23. Plaintiffs point to the effective use of neutralization at the Aberdeen and Newport facilities as an example of effective alternate technology. Pls.' Suppl. Mem. 20.

In addition, plaintiffs argue that the Army's use of RECs to update critical new information was "merely a vehicle to avoid the programmatic implications of the significant developments concerning technologies and human health and environmental impacts." Pls.' Mem. 20. Plaintiffs maintain that by using RECs, rather than preparing a supplemental EIS, defendants violated NEPA by "segmenting or piecemealing" the risks posed by the combined national effort to dispose of stockpiled chemical warfare agents. Pls.' Mem. 20. Such segmentation of the national program to destroy stockpiled chemical warfare agents and munitions, the plaintiffs claim, may artificially minimize the harmful effects of the incineration program.[15]

Defendants explain that the Army eliminated the Oregon and Utah sites from

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[15] Plaintiffs posit that "[f]or example, each incinerator may be deemed to have minimal dioxin emissions" but that combined the "cumulative impact of incinerator emissions . . . may be judged unacceptable." Pls.' Mem. 20- 21.

consideration in the ACWA program because the two sites would not serve the intended purpose and goal of the program: to test alternative destruction technologies that could be used for destroying assembled chemical munitions and to assess the application of any potential technology to the eight stockpile sites. *See* Defs.' Mem. 12. This review, mandated by Public Law 104-208, led the Army to conclude in its ACWA EIS that the earliest date for pilot tests would be January 2006. AR Doc. 54 at 2-3 (stating that PL 104-208 requires ACWA EISs to review alternative technology that has been "'certified' with regard to cost, safety, environment and schedule"). Thus, the Army excluded the Oregon and Utah sites because most, if not all, of the assembled chemical weapons at these two locations would have been destroyed before this anticipated starting date for pilot testing; moreover, the Army excluded the Aberdeen, Maryland and Newport, Indiana sites because there were no assembled chemical weapons at these two locations:

> Potential installations that could be used for pilot testing ACW destruction systems must have stockpiles with sufficient ACWs available for testing. An evaluation of the 1999 stockpiles and destruction schedules identified four reasonable alternative installations: [the four non-incineration sites: Anniston, Pine Bluff, Blue Grass and Pueblo]. Other installations were judged not to be reasonable for the following reasons: Chemical stockpiles at Aberdeen Proving Ground in Maryland and Newport Chemical Depot in Indiana were eliminated from further consideration in this EIS because there are ACWs at these locations. Johnston Atoll in the Pacific Ocean was eliminated from further consideration in this EIS because all chemical weapons at the installation were destroyed in early 2001. [Tooele, Utah and Umatilla, Oregon] were elminated from further consideration in this EIS because it is unlikely that an ACWA pilot facility could begin testing before the stockpiles at these installations have been destroyed by ongoing operations. The earliest date for ACWA pilot tests to begin startup and system checks is January 2006.

AR Doc. 54 at 2-3 to 2-4.

The court finds persuasive defendants' decision to not test alternative technologies at the four incineration sites because no practical or feasible alternatives existed that were ready for immediate implementation. *See* AR Doc. 54 at 2-3. As quoted above, defendants explained that the Army excluded the Oregon and Utah sites because most, if not all, of the assembled chemical weapons at these two locations would have been destroyed before this anticipated starting date for pilot testing. AR Doc. 54 at 2–3 ("[I]t is unlikely that an ACWA pilot facility could begin testing before the stockpiles at these installations have been destroyed by ongoing operations."). Moreover, the Army excluded the Aberdeen, Maryland and Newport, Indiana sites because there were no assembled chemical weapons at these locations. AR Doc. 54 at 2-3 to 2-4.

The court does not view the defendants' use of RECs as a strategy to segment the larger environmental picture into divided, smaller sections in order to downplay the severity of the government's plan. Rather, the court finds persuasive the Army's explanation that its decision to test certain potential alternatives at only four of the eight sites and then prepare site-specific EISs that elaborate on the original Final EIS is consistent with the CEQ-preferred method of "tiering."[16] By performing tests only at the facilities ripe for alternative technologies, the

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[16] Agencies are encouraged to tier their environmental impact statements to eliminate repetitive discussions of the same issues and to focus on the actual issues ripe for decision at each level of environmental review. Whenever a broad environmental impact statement has been prepared (such as a program or policy statement) and a subsequent statement or environmental assessment is then prepared on an action included within the entire program or policy (such as a site specific action) the subsequent statement or environmental assessment need only summarize the

(continued...)

Army's actions are in line with the CEQ's regulations, stating that "[a]gencies are encouraged to tier their environmental impact statements to eliminate repetitive discussions of the same issues and to focus on the actual issues ripe for decision at each level of environmental review." 40 C.F.R. § 1502.20 (internal citation omitted). The court finds persuasive the defendants' reliance on tiering as a "convenient mechanism that allows an agency to avoid redundant analysis" and agrees that "the Army spent extensive time, effort, and resources to achieve full compliance with the requirements of NEPA by preparing both a programmatic EIS for the entire [chemical weapons destruction] project and then preparing site-specific EISs for each disposal facility that incorporated the analysis included in the programmatic EIS." Defs.' Reply Mem.16. The defendants' use of a Final EIS followed by site-specific EISs adequately and appropriately responded to the risks posed by the proposed plan to destroy the nation's chemical weapons stockpile.

As discussed previously, courts review agency decisions under a deferential standard as determined by the APA; such deference is particularly warranted in matters of technical and scientific expertise. While the court holds the Army to a "searching and careful review," it cannot substitute its own judgment for that of an agency specifically assigned to oversee

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(...continued)

> issues discussed in the broader statement and incorporate discussions from the broader statement by reference and shall concentrate on the issues specific to the subsequent action. The subsequent document shall state where the earlier document is available. Tiering may also be appropriate for different stages of actions.

40 C.F.R. § 1502.20 (internal citations omitted).

technical questions warranting the utmost public health, environmental and national security concerns, as in the case of the destruction of chemical warfare agents. *Johnson*, 165 F. 3d at 287; *see also Baltimore Gas & Elec.*, 462 U.S. at 103. Simply put, defendants' decision to proceed with incineration at the four Challenged Sites is supported by the agency's own studies, NEPA documents and the NRC's conclusions that incineration technology was the only option available to "safely and effectively" dispose of the large size of the chemical munitions stockpile at these locations. AR Doc. 11 at 7-4 to 7-6. The court moreover agrees with defendants' assertion that "[t]he law does not require an agency to analyze or select speculative alternatives." Defs.' Mem. 26 (citing *Izaak Walton League of America v. Marsh*, 655 F.2d 346, 372, 374 (D.C. Cir. 1981), *cert. denied*, 454 U.S. 1092 (1981)) . Such an assertion is particularly true when alternative technology testing would result in a "waste of agency resources . . . incapable of either fully solving the problem at hand or fulfilling the mandate of Congress," as it would here. *Izaak Walton League*, 655 F.2d at 374 (quotation and citation omitted).

The court takes note of the decisions of the Utah District Court and the Tenth Circuit, which are based on a nearly identical set of facts. In *Chem. Weapons Working Group, Inc. v. U.S. Dep't of the Army*, 935 F. Supp 1206 (D. Utah), *aff'd*,111 F.3d 1485 (10th Cir. 1997) ("*CWWG I*"), the Court denied a request by the plaintiffs, many of whom are plaintiffs here, to enjoin the Army from testing incineration technology at the Tooele, Utah facility, finding that the asserted risks of harm due to dioxin exposure were too speculative to qualify as irreparable harm. 935 F. Supp at 1215. It is worth noting that the district court found that the risk of continued storage of chemical weapons was greater than the risk posed by incineration. *Id.* at

1216.

The Utah District Court in *CWWG I* emphasized that "the risks resulting from continued storage are one-hundred times greater than the risks resulting from disposal operations." *Id.* In this case, the risks from storing the chemical agent munitions at the Utah facility have diminished over time as the site has successfully destroyed the amount and type of stored munitions; nevertheless, as EG&G notes, "the munitions that have not yet been destroyed still pose a substantial risk to the public and environment which can best be reduced and eventually eliminated by [the incineration sites'] continued operations." EG&G Mem. 9-10. In light of the agency's reasoned explanation in excluding the four incineration sites from alternative technology testing, and the findings of the Utah District and Tenth Circuit Courts, the court finds that the Army acted reasonably in excluding the four sites from the ACWA program.

CONCLUSION

Based on the foregoing, the court hereby denies plaintiffs' motion for summary judgment and grants defendants' and defendant-intervenor's motions for summary judgment. Judgment shall be entered accordingly.

Date: August 19, 2009

/s/ Richard K.Eaton
RICHARD K. EATON
United States District Judge[17]

[17] Richard K. Eaton, a Judge of the United States Court of International Trade, sitting by designation.