UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAY 7 2008

ASSISTANT ADMINISTRATOR
FOR ENFORCEMENT AND
COMPLIANCE ASSURANCE

The Honorable William C. Anderson
Assistant Secretary of the Air Force for
Installations, Environment & Logistics
Department of the Air Force
SAF/IE
1665 Air Force Pentagon
Washington, DC 20330-1665

Re: Administrative Order, U.S. EPA Docket Number RCRA-04-2007-4011, Tyndall Air Force Base, Bay County, Panama City, Florida

Dear Mr. Anderson:

This letter conveys my determination, under authority delegated from the Administrator, regarding the Resource Conservation and Recovery Act (RCRA) section 7003 order (Order) issued by the U.S. Environmental Protection Agency (EPA) on November 21, 2007 to the Air Force for contamination on the Tyndall Air Force Base (TAFB). After full and fair consideration of the points raised by the Air Force in its oral discussions and written materials, I conclude that the management of hazardous and solid waste at Tyndall Air Force Base may present an imminent and substantial endangerment, and that the Order issued is necessary to abate that endangerment. Responses to the issues raised by the Air Force along with factual references to information contained in the administrative record are enclosed with this letter.

Under 42 U.S.C. § 6961(b)(2), "no [RCRA] administrative order issued to . . . a department . . . shall become final until such department . . . has had the opportunity to confer with the Administrator." You requested this opportunity by letter dated November 30, 2007, and provided supplemental materials by letters dated December 13, 2007, and January 24, 2008. On January 28, 2008, Jimmy Palmer (Region IV Regional Administrator) and I met with you and conferred on this matter. At that time, you requested that EPA withdraw the Order in its entirety, or alternatively, remove certain parcels from the scope of the Order.

As you know, Tyndall Air Force Base was placed on the National Priorities List (NPL) in 1997. Since that time, the Air Force has made insufficient progress in investigating and addressing the contamination across most of the site. Further, the Air Force refused to sign the Federal Facility Agreement (FFA) required under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The Air Force's pace in conducting the study and cleanup of this NPL site is unacceptable and the mechanism contemplated by the CERCLA statute to address this situation was rejected by the Air Force. As Congress specifically

provided, nothing in the Superfund law affects the obligation of a federal agency to comply with any requirement under RCRA. Given the Air Force's resistance to signing an acceptable FFA with essential provisions to ensure appropriate oversight and protectiveness, the endangerment at the site necessitates that EPA move forward with the Order.

We have carefully reviewed the information available in the administrative record for this Site and are able to find justification for granting your request that the Lynn Haven Defense Fuel Support Point be removed from the scope of this Order. The attached Order has been modified to reflect that decision. In accordance with Section XVIII, Paragraph 102 of the Order, the Order becomes effective within five (5) calendar days of the Air Force's receipt of my determination. According to Section XXIII of the Order, the Air Force then has 15 calendar days from the effective date of the Order to notify EPA in writing of its intent to comply.

We continue to stand ready to enter into the standard, model-based FFA that EPA has utilized at other federal sites in order to fulfill the CERCLA Section 120 requirements. Indeed EPA and the Army signed an FFA in March, 2008, for the Fort Eustis installation. Given that DoD and all other services reviewed and approved the Fort Eustis FFA, we are prepared to accept an FFA for TAFB that is consistent with the Fort Eustis FFA. The Fort Eustis FFA was the subject of lengthy, good faith negotiations between EPA and the Army. In the interest of trying to avoid duplicative negotiations, we believe both EPA and the Air Force would benefit by using the Fort Eustis FFA as the template for TAFB. We ask that you give this offer serious consideration. In the meantime, the final Tyndall Order ensures that the Air Force responds to the imminent and substantial endangerment at Tyndall Air Force Base in a timely and protective manner pursuant to EPA's oversight.

Sincerely,

Granta Y. Nakayama

Enclosures

ENCLOSURE 1

# EPA RESPONSE TO ISSUES RAISED BY AIR FORCE IN INITIAL MATERIALS SUBMITTED RE: OPPORTUNITY TO CONFER ON TYNDALL AFB RCRA 7003 ADMINISTRATIVE ORDER

**Issue 1:**
**Both the Comprehensive Environmental, Response, Compensation and Liability Act (CERCLA) § 120 (42 USC § 9620) and the Defense Environmental Restoration Program (DERP) (10 USC § 2701) mandate that the Department of Defense, and its components such as the Air Force, are to conduct response actions to address releases of hazardous substances under CERCLA. What are the legal or other bases for EPA to attempt to administratively order the Air Force to respond to such releases under section 7003(a) (42 USC § 6903 (a)) of the Resource Conservation and Recovery Act (RCRA)?**

**Issue 2:**
**EPA listed Tyndall AFB on the CERCLA National Priorities List (NPL) on May 1, 1997, which triggers under CERCLA the requirements, among other things, for the Air Force to conduct necessary response actions under CERCLA. At all times since then Tyndall AFB has been conducting response actions under CERCLA with the full knowledge and agreement of EPA. Since approximately mid to late 2000 and continuing until the present, EPA has sought for the Air Force to enter an Interagency Agreement under CERCLA 120(e), which similarly requires cleanup activities be conducted under CERCLA. What are the legal or other reasons and basis that EPA now seeks to compel the Air Force to clean up under RCRA?**

**Issue 3:**
**Both CERCLA, as delegated through Executive Order 12580, and DERP assign to the Air Force lead agency status, authority and responsibility at our facilities to conduct environmental restoration activities, specifically CERCLA response actions for releases of hazardous substances. Similarly, DERP (see generally 10 USC § 2701(a)(3) and 2705(a&b), CERCLA § 120 and EO 12580 carefully delimit the roles, authorities and requirements of EPA in general to that of consultation, review and comment at a DoD facility, except as otherwise specifically set forth in CERCLA §120. Under what authority does EPA both negate and contradict these Air Force authorities and expand their authorities as provided in this order?**

As a legal matter, EPA's use of non-CERCLA administrative order authority at Tyndall Air Force Base (TAFB) is not limited, prohibited, or restricted in any way by any provision in CERCLA, other laws, regulations or Executive Orders. EPA may use its RCRA Section 7003 order authority to address a potential threat to human health and the environment at any site where the statutory pre-requisites are met, including NPL sites. There is no irreconcilable conflict between CERCLA and RCRA. In such circumstances, courts have long recognized that there is no implied repeal of a statute by a later enactment. When two statutes are capable of co-existence, absent a clearly expressed congressional intention to the contrary, each is to be regarded as effective. *Morton v. Mancari*, 417 U.S. 535, 550-551 (1974); *County of Yakima v. Confederated Tribes and*

*Bands of the Yakima Indian Nation*, 502 U.S. 251, 264 (1992), *United States v. Waste Industries, Inc.*, 734 F.2d 159, 160 (4th Cir. 1984) (RCRA Section 7003 order available to EPA regardless of availability of CERCLA remedy).

RCRA Sections 7003 and 6001 provide EPA with the legal authority to issue the Order to the Air Force at TAFB. Federal agencies like the Air Force are subject to EPA's Section 7003 abatement authority to the same extent as private parties. CERCLA Section 120(i) expressly provides that "[n]othing in this section shall affect or impair the obligation of any department, agency, or instrumentality of the United States to comply with any requirement of the Solid Waste Disposal Act [42 U.S.C.A. Section 6901 et seq.] (including corrective action requirements)." In addition, Section 300.425 (b)(2) of the National Contingency Plan provides that "EPA may also pursue other appropriate authorities to remedy the release, including enforcement actions under CERCLA and other laws."

**Issue 4:**
**Congress specified in CERCLA § 120(e) the limited oversight and remedial authority EPA has over federal NPL facilities and the mechanism - an interagency agreement (IAG) - by which these authorities were to be formalized. Furthermore, Congress provided in CERCLA § 120(e)(5) the consequences and course to be followed when an IAG was not entered as and when required, which was to provide specified information to Congress in DoD's annual report to Congress. Under what legal or other authority does EPA require an expansion to the IAG requirements specified in CERCLA and to impose a mechanism other than an IAG?**

CERCLA section 120(a) requires that federal agencies comply with CERCLA in the same manner as private parties, and CERCLA section 120(e)(2) mandates that each Federal agency "shall enter into an interagency agreement with the Administrator for the expeditious completion... of all necessary remedial action at such facility." Congress intended that Federal agencies be held accountable for expeditious completion of cleanup, and provided avenues for EPA to enforce IAGs through CERCLA sections 109 and 122, and for citizens to enforce through CERCLA section 310. The statute also makes clear that the FFA shall "include, but shall not be limited to," the three minimum elements referred to in the statute. Rather than EPA's role consisting of "limited" oversight and remedial authority as alleged by the Air Force, the statute recognizes EPA's broad authority by vesting the ultimate decisionmaking authority for all remedial actions in the hands of the EPA Administrator in the event of a disagreement between EPA and a federal agency. Based on many years of experience overseeing private party and federal facility cleanups, EPA has included in the order those terms and conditions needed to ensure proper oversight so that the Air Force can complete the necessary cleanup work in an efficient and timely manner.

Finally, we would point out that no reporting mechanism replaces EPA's oversight responsibilities for ensuring protective and timely cleanup of a federal facility that is on the NPL.

Issue 5:

**The unitary executive doctrine generally provides that the President's ability to manage all federal executive agencies and resolve disputes between them cannot be impaired or violated by one federal agency issuing unilateral orders against another. This was a primary reason for Congress providing an IAG as the appropriate and applicable mechanism to formalize legally binding agreements. Under what authority has EPA ignored and abrogated this doctrine?**

Enacted as a provision of the Federal Facility Compliance Act, RCRA Section 6001(b) provides that the EPA "*Administrator may commence an administrative enforcement action against any department, agency, or instrumentality of the executive, legislative, or judicial branch of the Federal Government pursuant to the enforcement authorities contained in this [title]. The Administrator shall initiate an administrative enforcement action against such a department .... in the same manner and under the same circumstances as an action would be initiated against another person.*" In interpreting this specific provision in a June 14, 2000 decision involving the availability of penalties for violations of RCRA Section 9007(a), DOJ's Office of Legal Counsel referred to the legislative history of RCRA Section 6001(b), which states that "*the clarification of this authority is necessary because, in the past, other Federal agencies, including the DOJ, have disputed EPA's authority to issue administrative orders against other Federal agencies. The Reagan Administration sought to invoke the "unitary executive" theory to prevent the EPA from issuing administrative orders against other Federal agencies....Accordingly, the language contained in the [FFCA] with respect to administrative orders clarifies existing law, so as to provide the EPA with clear administrative enforcement authority sufficient to ensure Federal facility compliance.*" DOJ concluded that the unitary executive theory does not preclude EPA from commencing any administrative enforcement action under RCRA, including the imposition of penalties.

**Issue 6:**

**Assuming, for purposes of discussion only, that EPA has the authority to issue the Air Force an administrative order at Tyndall AFB, under what legal basis has EPA determined that the order can be issued under an authority other than CERCLA § 106 (42 USC § 9606)? As under CERCLA § 106 DoJ concurrence would be required, why has EPA not sought such concurrence, or if it has been sought, who was consulted with and concurred in DoJ?**

As a legal matter, EPA is authorized to use the enforcement authorities (including RCRA Section 7003) it believes are necessary and appropriate to achieve proper oversight of the cleanup at TAFB. Nothing in any statute requires EPA to choose one abatement authority over another in deciding which approach will be most effective. Furthermore, EPA has issued guidance encouraging the selection of the most appropriate ISE authority for the situation at hand; that guidance clearly recommends that the most appropriate statutory authority should be used under the circumstances presented at a site.

Issue 7:
In Section III of the order, EPA refers to numerous areas of concern (AOC)/sites, studies and reports, and substances discovered released to the environment, For each solid waste management unit (SWMU) and AOC and each substance release:

a. **Which SWMU/AOCs and respective substance(s) released may constitute an imminent and substantial endangerment (ISE) and for each that is determined may present an ISE, what is the specific basis for that determination and nature of the specific ISF (e.g. nature/level and extent of contamination, specific environmental and human health receptors and nature of harm or threat)?**

b. **For each such EPA determination, what was the evidence (i.e., a report, study, letter from any person, etc.) that EPA was in receipt of that formed the basis of the ISF determination, when and who in EPA first received it (whether or not that was the person who made the ISE determination), and when and by whom was this evidence or other communication indicating a possible ISE first made to the EPA Region 4 RCRA Division Director?**

c. **For each such determination, identify the nature, author and date of any EPA communication, prior to this order, to any Air Force official or representative of this EPA ISF determination to an Air Force official or representative and that person's name, as well as any actions EPA identified therein that the Air Force should cease or take to address that ISE?**

d. **Regardless of any such ISE determination, identify the nature, author and date of any other communication from EPA to the Air Force identifying any AOC and release identified in section III of the order as an actual or potential threat to human health and the environment, actions EPA requested or identified that the Air Farce should take, and to whom in the Air Force that communication was directed?**

e. **Respecting the determination and order in section III of the order, please identify any such specified solid or hazardous waste activity that is occurring presently that may constitute an ISE?**

Hazardous waste and hazardous constituents have been released throughout TAFB into the soils, groundwater, creeks and bayous. DDT concentrations in Shoal Creek Bayou are at toxic levels and are increasing. They pose an endangerment to aquatic life and the dependant environmental community. Terrestrial receptors, birds, and waterfowl, some of which are protected species, are exposed to contaminants which may impact their reproductive systems and, as a result, destroy the functional integrity of the ecosystem. DDT contamination in Shoal Creek Bayou may also affect recreational fishers and their families through consumption of contaminated fish.

TAFB has free petroleum product in the soils and groundwater at refueling areas across the site. Groundwater is typically only 2-3 feet below the surface, and excavations for any purpose, such as pipeline repair or building construction, would bring workers into contact with that free product. There are several areas of known groundwater contamination including areas where groundwater sample results show TCE

contamination above levels which pose a risk to human health if consumed. Groundwater is used as a drinking water source at some locations at the Facility, and the aquifers beneath the Facility are ecologically vital, potable water sources. Organic and heavy metal constituents are present in surficial and deep groundwater at concentrations exceeding acceptable health protection standards. Recent sample results also show that TCE, vinyl chloride and benzene have migrated from shallow to deeper groundwater at the Facility.

In addition to the DDT and free petroleum product contamination described above, TAFB has various ranges across the site, some of which are closed, which contain used (fired), unfired ammunition and improperly buried munitions. Materials exposed to the weather are leaching hazardous constituents to the groundwater, which, as mentioned above, at some locations is only 2-3 feet below the surface, and represent a present and future risk to groundwater quality. Access is not limited in these areas and TAFB does not have land use controls in place so that military personnel, their families, workers or trespassers may come into contact with dangerous munitions.

The concentrations of contaminants in the soils, sediments, groundwater and surface water at multiple locations across the Base exceed acceptable State and Federal standards for protection of human health and ecological resources. In addition, adequate access controls and land use restrictions have not been implemented by the Air Force to prevent exposures to contaminants. Military and civilian personnel, visitors, trespassers, and sensitive ecological resources are at risk as a result of environmental conditions at the Facility.

In specific response to Issue 7, subsections a, b, and e, EPA refers the Air Force to the Administrative Order issued in this case and its supporting administrative record. In particular, Section III, Findings of Fact, in the Administrative Order details the past or present handling, disposal or storage practices which have contributed to and are contributing to the imminent and substantial endangerment at TAFB, including circumstances of the distribution and magnitude of contaminants in environmental media and exposure pathways.

In response to Issue 7 subsections c and d, the administrative record in this case, as well as correspondence, meetings and information exchanges between EPA and the Air Force, at least since TAFB was listed on the National Priorities List, document EPA's efforts to get the Air Force to undertake effective and timely response action to cleanup and remediate releases of hazardous wastes and hazardous substances at TAFB.

**Issue 8:**

**In paragraphs 38-66 of the order EPA sets forth numerous documents, plans and other deliverables that must be submitted by the Air Force to EPA for review and comment and approval. Specified dates, schedules and timeframes are required of the Air Force, but there are no review and comment timeframes listed for EPA. How long will EPA take to conduct such reviews? What recourse will the Air Force have if the EPA does not meet these review times, or in their absence, a reasonable timeframe?**

The first submittal under the RCRA order is a Site Management Plan (SMP) which must include proposed schedules and deadlines for the completion of all tasks to be performed at the Areas of Concern. Therefore, to a large extent, the Air Force determines how quickly the response work progresses. The language of this order regarding EPA review is consistent with the language typically utilized by EPA in unilateral administrative orders.

**Issue 9:**

**Numerous provisions in the order require the Air Force to comply with applicable EPA guidance. As guidance documents are not legal requirements, what is the legal or other basis for EPA making them mandatory, enforceable provisions in the order?**

As a legal matter, EPA is authorized to include the terms and conditions it determines are necessary to ensure protection of human health and the environment when it issues a RCRA section 7003 abatement order. Nothing in any law or regulation limits EPA's ability to draw on policy guidance when determining appropriate terms and conditions for an order.

**Issue 10:**

**Paragraph 99 of the Order states the Air Force shall obtain all permits and approvals necessary to perform work required by the Order. As CERCLA § 121(e) exempts the Air Force from obtaining any federal, state or local permit for on-site response actions, which permits or approvals for on-site work required by this order does EPA think would not be covered by this CERCLA provision?**

RCRA does not provide a permit exemption. Whether the Air Force would be required to acquire state permits or enjoy the section 121(e)(1) permit exemption is for the Air Force and Florida to determine based on the facts at TAFB. If there is a permit for which EPA is the issuing authority, we will, likewise, work with the Air Force to determine CERCLA's permit exemption availability based on the facts at TAFB.

**Issue 11:**

**Under what process in the order can the Air Force seek to present evidence to and obtain an EPA determination that as a result of investigatory or corrective measures that an SWMU/AOC and substance release no longer constitutes an ISE and therefore no further work under this order is required?**

EPA concluded that the management of hazardous and solid waste may present an imminent and substantial endangerment as statutorily required for issuance of a RCRA section 7003 order. Once the order becomes final, EPA will review the Air Force's proposed Site Management Plan to determine the work required under the order. Paragraphs 52, 53 and 54 of the TAFB order address the completion of response work for Areas of Concern, for all response work at TAFB and for all requirements of the RCRA order. For instance, the Air Force shall prepare and submit to EPA a "Final Corrective Measures Implementation Completion Report" at the completion of all corrective measures for TAFB. The process required in RCRA is very similar to the process used under CERCLA. In addition, Section 108, "Termination," of the Order provides a process whereby EPA may issue a determination to the Air Force on a site-wide basis that all work required under the Order is complete.

Issue 12:
**How does the EPA Region 4 RCRA Division Director reconcile the determination in section IV of "imminent and substantial endangerment" and the Region IV Government Performance and Results Act Milestones (GPRA) reported status a: "under current conditions at this site, potential or actual human exposures are under control and contaminated groundwater migration at [Tyndall] is under control?"**

The standard for determining whether the management of hazardous or solid waste may present an imminent and substantial endangerment differs significantly from the basis that EPA utilizes to define the environmental indicator of whether human exposures are under control at an NPL site. As noted above, EPA need only show that there is a potential for imminent threat and a reasonable cause for concern that health or the environment may be at risk is enough to establish an imminent and substantial endangerment. In contrast, the measure that EPA uses to communicate interim progress at NPL sites ("Human Exposures Under Control") focuses solely on current conditions at a site that provide a pathway for human exposures. This qualitative screening tool only takes into account current land and ground water use and does not consider ecological receptors. It is anticipated that these determinations will be reviewed each year and revised as appropriate. In addition, it is anticipated that final remedies will address potential future human exposure scenarios, future land and groundwater uses, and ecological receptors. Consistent with this approach, EPA has updated its website (http://cfpub.epa.gov/supercpad/cursites/csitinfo.cfm?id=0401205).

**Issue 13:**
**Since Florida is authorized for RCRA corrective action, what is the basis for EPA directing in this Order comprehensive corrective action (see for example Section VI)? Did EPA confer with Florida before issuing this Order, and if so, what was Florida's position respecting EPA's issuance of this Order?**

Enforcement authority under RCRA Section 7003 is reserved to EPA and cannot be delegated to the states. Although Florida has enforcement responsibilities under its authorized RCRA program, EPA retains its authority to take enforcement action under RCRA Section 7003 regardless of whether a state has taken its own action. Authority to take action under RCRA Section 7003 is provided to the EPA Administrator under the statute and is further delegated to the Regional Administrators via Delegation No. 8-22-A-C. EPA elected to use its RCRA Section 7003 authority to address documented widespread contamination at TAFB.

Pursuant to Section 7003(a) of RCRA, 42 U.S.C. § 6973(a), and in conjunction with the issuance of this Administrative Order, a notification letter was sent to the State in correspondence dated November 21, 2007, from G. Alan Farmer, RCRA Division Director, to Tim Bahr, State of Florida, Department of Environmental Protection ("FDEP"). In addition, EPA provided verbal notice in early November to FDEP of EPA's intent to issue an order under the authority of RCRA Section 7003. As stated earlier, RCRA Section 7003 enforcement authority, as with EPA's other enforcement authorities under RCRA Sections 3008(a), 3008(h), and 3013, is not delegable to the state.

Issue 14:

**Appendix A to the Order lists numerous military range sites as SWMUs/ AOCs covered by this Order. EPA has promulgated regulations that state a military munition is not a solid waste when used for its intended purpose (40 CFR § 266.202(a)) and clarify that the potential exercise of imminent and substantial endangerment authorities as to statutory solid waste under Section 7003 of RCRA is limited to munitions that land off-range and are not promptly rendered safe and/or retrieved (40 CFR § 266.202(d)). Under what legal basis is EPA asserting any of these military ranges sites can be addressed under this Order?**

EPA's record demonstrates that there are used munitions, and, in some cases, buried waste munitions and residuals from the open-burning and open-detonation (OB/OD) of munitions on the 18 identified closed ranges. For the buried waste munitions and the OB/OD residuals there can be no reasonable disagreement that such materials are solid waste under RCRA. Moreover, consistent with the position the Agency confirmed in its October 21, 2005 Memorandum entitled "U.S. Corps of Engineers (COE) Letters to California, Texas and Illinois Regarding Munitions on Closed Military Ranges" from David J. Kling, Director Federal Facilities Enforcement Office to Regional Enforcement Managers (Closed Range Memorandum), EPA believes the used munitions left on the closed ranges by the military have been in the environment long enough to be considered statutory solid waste under RCRA. The record also demonstrates that the current management of the wastes residing on these ranges is presenting an imminent and substantial endangerment.

- Based on preliminary assessments, Tyndall Air Force Base has reported OB/OD activities and buried waste munitions on at least three (3) closed ranges including the Explosive Ordnance Disposal Range (aka OT021), Crooked Island (aka OT028), and the EOD Burial Site (which encompasses an explosive range burn pit (SWMU 13A) and several explosive range burial pits (SWMU 13B)). The buried munitions and OB/OD residuals at these closed ranges are solid waste under RCRA.
- Based on preliminary assessments, Tyndall Air Force Base has observed and reported discarded munitions on at least four (4) closed ranges. These ranges include the Jeep Range, the Stationary Target Range, the Tower Range, and the Skeet Range West (aka FR038). Munitions have been left on the Skeet Range West for over 30 years. Munitions have been left on the Jeep Range, Stationary Target Range, and Tower Range for over 65 years. These discarded munitions are appropriately considered a statutory solid waste under RCRA.

During the 2006-2007 Phase I Comprehensive Site Evaluation activities, Air Force contractors did not perform in-person site visits to each identified closed range to visually inspect for discarded munitions. However, the Air Force has documented through file review that each of the remaining eleven (11) closed ranges began operations in the early 1940s and ceased operations not later than the 1950s. Therefore, discarded munitions have been left at these 11 ranges for 50 to 65 years and are likely to be discovered when the Air Force completes appropriate reconnaissance.

The Air Force contends that no range areas (operational and closed) should be included in the Order. First, it asserts that the Order fails to allege any specific releases at any of the 24 munitions response areas (i.e., ranges) that constitute an imminent and substantial endangerment. EPA disagrees with the Air Force's assertion and believes the record is replete with evidence demonstrating that used munitions, buried munitions and OB/OD residuals present an imminent and substantial endangerment.

EPA has identified multiple geographic areas of TAFB where various combinations of waste sites, closed ranges, and operational ranges are colocated. In these geographic areas, contaminants are likely to be co-mingled in all environmental media, particularly in groundwater due to leaching of constituents. Contaminants of concern associated with releases from discarded or buried munitions or OB/OD residues to groundwater present an imminent and substantial endangerment to individuals who may be exposed to the groundwater through primary or secondary water uses. In the majority, waste sites, closed ranges, and operational ranges are colocated along the shoreline of Tyndall AFB, in close proximity to St. Andrew Bay, St. Andrew Sound, and the Gulf of Mexico. Contaminated groundwater is discharging or threatens to discharge to surface water and sediments, presenting an imminent and substantial endangerment to ecological resources, including the approximately 40 threatened and endangered species, at Tyndall AFB.

An example of this situation can be found at the 40 mm Practice Grenade Range, which is a 14 acre medium and large caliber operational training range that began operations in the 1970s. Colcated with the Grenade Range is TAFB's operational EOD Range. Also colocated with the Practice Grenade Range are six (6) closed ranges: (i) the Jeep Range, (ii) the Skeet Range East, (iii) the EOD Range OT021, (iv) the EOD Burial Site (v) the Harmonization Range, and (vi) the Burst Control Range. The Practice Grenade Range (as well as an old Drone Launch Area) is located wholly within the footprint of the closed Jeep Range, and between the footprints of the Skeet Range East (which is upgradient) and the EOD range sites (which are downgradient). These sites overlap in operational footprint, and are physically colocated along a 7 mile stretch of St. Andrew Sound shoreline immediately adjacent to and south of the Highway 98 public thoroughfare on Tyndall AFB.

Likely contaminants of concern associated with the operational and closed ranges described above include perchlorate (a common contaminant in soils and groundwater associated with practice grenade ranges), heavy metals, solvents, PAHs, diesel and automotive fuels, buried munitions, fired munitions, and OB/OD residues.

- During the 2006 CSE field reconnaissance, the Air Force observed small arms projectiles and ammunition casings in high concentrations in the berms and on the ground surface of the Jeep Range. (These discarded munitions are appropriately considered a statutory solid waste under RCRA.)
- The Air Force has documented that EOD range activities, EOD burn pits, and EOD waste disposal (burial) activities occurred in this area. (The buried

munitions and OB/OD residuals at these closed ranges are solid waste under RCRA.)

- Soil sampling at the EOD Range Area has documented the presence of barium, cadmium, and lead. Groundwater sampling has demonstrated the presence of nitroaromatics, benzene, ethylbenzene and 2,4-dinitrotoluene, among other compounds. These contaminants are consistent with the contaminants expected to be released to environmental media from closed and operational range activities. (Specific releases associated with operational and closed range operations have been documented by the Air Force in this area of colocated sites).

Releases from these closed and operational ranges may present an endangerment to human health at TAFB. EPA records further indicate that Potable Well 2a, Building 8523, Drone Launch (1984 Phase II Installation Restoration Program Survey), is located within the footprint of these colocated waste management and disposal areas. The current operational status of this well has not been confirmed by the Air Force to EPA and it is not known if this well has been sampled to determine contaminant impacts from closed range, operational range, and drone launch activities. However, Air Force sampling has documented groundwater contamination (nitroaromatics, benzene, ethylbenzene and 2,4-dinitrotoluene, among other compounds) associated with this area of colocated sites. The threat posed by contaminated groundwater and potential human exposure through primary and secondary water uses contributes to ISE at Tyndall AFB.

Releases from these closed and operational ranges may present an endangerment to ecological resources at TAFB. This entire assemblage of closed and open ranges and the historical drone launch runway occupies approximately 2,845 acres, spanning the majority of the southern half of the peninsula, south of Highway 98 and along a 7 mile stretch of St. Andrew Sound coastline. Air Force construction of jeep track berms created low areas and wetland habitat throughout the 1,672 acres comprising the Jeep Range component of theses colocated units. Air Force sampling has documented groundwater contamination (nitroaromatics, benzene, ethylbenzene and 2,4-dinitrotoluene, among other compounds) associated with this area of colocated units. The threat of contaminated groundwater discharging to the surface waters and sediments of TAFB wetlands and St. Andrew Sound, and the potential exposure of ecological resources to these contaminants, contributes to the endangerment at Tyndall AFB.

In order for the Air Force to abate the endangerment to human health and ecological resources at Tyndall AFB, it is necessary to investigate and potentially remediate all likely contributing sources to groundwater, including ranges and regardless of operational status.

Second, the Air Force maintains that the Order conflicts with Air Force's obligations under 10 U.S.C.§§ 2701 and 2710. These provisions direct DOD to inventory, prioritize and respond to defense sites known or suspected of containing UXO, discarded munitions or munitions constituents. However, the Air Force can point to nothing in §§ 2701 or 2710 to suggest that Congress intended these sections to limit EPA's authority under RCRA § 7003.

Third, the Air Force argues that munitions used for their intended purpose at operational military ranges are not regulatory solid or hazardous waste and "remain so excluded even when a range becomes non-operational." The Air Force further argues that the munitions could not become statutory waste because EPA's Military Munitions Rule (MMR) states "that only military munitions that land off range and are not promptly rendered safe and/or retrieved become a statutory solid waste . . . (40 CFR § 266.202(d))." EPA agrees that munitions used for their intended purpose are not regulated as hazardous waste under RCRA Subtitle C. EPA disagrees, however, that the Military Munitions Rule at 40 CFR § 266.202(d) identifies the **only** way military munitions can become statutory solid waste. Nothing in the language of that provision even remotely suggests that EPA imposed that limitation in the rule. 40 C.F.R. § 266.202(d) merely provides one example of when a used military munition becomes a statutory solid waste. **The MMR simply does not broadly address the issue of when used munitions become statutory solid waste.** Thus, contrary to the Air Force's assertion, the exercise of imminent and substantial endangerment authorities for statutory solid waste under Section 7003 of RCRA is not limited to munitions that land off-range and are not promptly rendered safe and or retrieved (40 CFR § 266.202(d)). As EPA states in the Closed Range Memorandum, "it is EPA's position that munitions used for their intended purpose, including UXO, would at some point become solid waste potentially subject to RCRA . . . In the absence of a definitive interpretative rule, the issue of whether munitions have become a statutory solid waste depends on whether they have been left in the environment long enough to be considered by EPA to be discarded within the statutory definition of solid waste. (See Connecticut Coastal Fisherman's Assoc. v. Remington Arms Co., 989 F.2d 1305 (2nd Cir. 1993).) We see nothing in the Military Munitions Rule or its preamble which precludes EPA or a state from determining munitions to be a statutory solid waste given the facts at a particular site." Closed Range Memorandum at 2.

Finally, the Air Force asserts that "[a]s to materials located on active ranges, they are excluded from this potential avenue of being identified as statutory solid waste." EPA disagrees that none of the materials located on active ranges may be identified as statutory solid waste. First, munitions buried or otherwise disposed of on an open range are solid and potentially hazardous waste. The MMR at section 266.202(a)(1)(iii) expressly excludes "on-range disposal or burial of unexploded ordinance and contaminants when the burial is not part of product use" from the scope of "intended use." Hence, EPA considers munitions or the residuals from munitions use that have been disposed or buried on an open range to be solid waste. Second, EPA may also use its statutory remedial authorities to address contamination from munitions use where it has information that such contamination may present an imminent and substantial endangerment. For example, where such contamination has reached or threatens to reach groundwater or surface water, particularly if the contamination threatens such water off the range, it is considered solid waste subject to RCRA's remedial authorities. EPA made this position clear in both the preamble to the Military Munitions Rule (62 FR 6631) and in the Military Munitions Final Rule Response to Comments Background Document at pages 30 & 36-38.

Issue 15: Air Force Request to remove Lynn Haven DFSP parcel from the scope of the TAFB RCRA Order (Ref: Anderson to Palmer, 12 13 2007)

EPA supports the beneficial re-use of property and has been working closely with the Air Force to seek to accomplish that goal. The Lynn Haven Defense Fuel Support Point (DFSP) is variously known as waste site OT018 in the TAFB Installation Restoration Program and Operable Unit 12 in the TAFB CERCLA program. This parcel is located in the City of Lynn Haven on North Bay, approximately 15 miles northwest of TAFB. DFSP was reportedly used as a fuel storage and distribution point by the Army, Navy, and the Defense Logistics Agency since 1943. As summarized in an August 2000 Preliminary Assessment/Site Investigation, previous investigations dating back to the early 1980's indicate elevated levels of petroleum, pesticides, and metals in the soil and groundwater.

EPA files document that the Air Force has not implemented a consistent approach to investigation and cleanup of the Lynn Haven DFSP. Nevertheless, EPA has worked in good faith with the Air Force to implement a protective cleanup program in support of the timely return of this property by the Air Force to productive reuse by the City of Lynn Haven. From 1984 through 1997, the Air Force and Defense Logistics Agency (DLA) conducted multiple investigations, produced approximately 20 reports, and initiated cleanup activities for cleanup of petroleum contamination of the DFSP with oversight by the Florida Department of Environmental Protection (FDEP).

Starting in 1998, the Air Force embarked on a typical CERCLA remedial investigation (RI) of the non-petroleum contamination at DFSP, stating that the CERCLA cleanup would serve to complement the DLA petroleum cleanup. Pursuant to the Air Force's request in 2001, the Lynn Haven DFSP was identified in CERCLIS as Operable Unit 12 of the TAFB National Priorities List site. The Air Force initiated a Phase1 Remedial Investigation in 2001, and additional RI scoping was conducted in 2003 to address data gaps in the RI to support risk assessment and final remedy selection.

EPA files further document that between February 2005 and July 2005, the Air Force informed EPA and FDEP that the cleanup of the DFSP would now be solely under the State Petroleum Program. In 2005, the EPA/AF/FDEP partnering team agreed to add an action item for the AF to provide a letter to EPA documenting the basis for its request to remove OU 12 from the Tyndall NPL database The Air Force never provided such a letter despite EPA's repeated requests. In November of 2007, OU 12, was included as an operable unit to be addressed under the provisions of the RCRA 7003 Administrative Order.

On December 13, 2007, the Air Force sent a letter to EPA requesting removal of DFSP from the Order based on the Air Force's representation that it had completed remediation of the DFSP and that the property was ready for reuse. As noted above, FDEP has provided continuous regulatory oversight of the cleanup from at least 1990 to date under the State Petroleum Program. Given the Air Force's request to now remove this parcel from the scope of the Order and the State's continuing oversight role

(including the recognition that the State must make the requisite finding under CERCLA Section 120 that the property is suitable for transfer), EPA has removed this parcel from the scope of the proposed order and will continue moving forward with the process to recharacterize this parcel in the CERCLIS database.

ENCLOSURE 2

# EPA RESPONSE TO ISSUES RAISED BY AIR FORCE IN SUPPLEMENTAL MATERIALS SUBMITTED RE: OPPORTUNITY TO CONFER ON TYNDALL AFB RCRA 7003 ADMINISTRATIVE ORDER

**Issue 1: EPA's own current publicly posted Government Performance and Results Act (GPRA) environmental indicators and milestones for Tyndall AFP conclude that under current facility conditions actual or potential human exposures are under control.**

Please see Response to Issue 12 of Enclosure 1.

**Issue 2: EPA's Findings of Fact and Conclusions of Law Rely on Outdated Preliminary Assessments and Do Not Substantiate the Existence of a Present Imminent and Substantial Endangerment**

The Air Force asserts that the RCRA § 7003 Administrative Order (AO) relies solely on the RCRA Facility Assessment conducted by A.T. Kearney for EPA Region 4, finalized approximately 13 years ago. The Administrative Record Index for the Tyndall RCRA 7003 AO includes documentation that ranges from 1994 through 2007, with the majority of the documents occurring in the 2002-2007 timeframe.

Further, review of Section III, Findings of Fact and Conclusions of Law, clearly demonstrates that the EPA relied considerably on information and data provided by the Air Force in the eighteen months preceding, and as recently as two weeks before, issuance of the AO on November 21, 2007. Some examples from this timeframe include:

- *Earth Tech.* ***Site Status Report and Remedial Action Modification Plan, IRP Site No. SS019 BX Service Station, Tyndall AFB****. May 2006. (see Para. 15 of the Order).*

- *Earth Tech.* ***Update/Status Remedial Action Review. IRP Site SS019, BX Service Station.*** *Update Presentation to Tyndall Tier I Partnering Team. April 2007. (see Para. 15 of the Order)*

- *USACE Omaha District and URS Group, Inc.* ***Comprehensive Site Evaluation Report, Phase I, Draft Final Report, Tyndall AFB****. This report addresses Munitions Response Areas. April 2007. (see Para. 18 of the Order)*

- *CH2MHill.* ***Revision 1: Supplemental Sampling Work Plan, Site OT029, Tyndall AFB****. Shoal Point Bayou. May 2007. (see Paras. 15 and 16 of the Order)*

- *Earth Tech.* ***Draft Final Record of Decision, IRP Site No. FT017, Former Highway 98 Fire Training Area, Tyndall AFB.*** *July 2007. (See Para. 22 of the Order).*

- *Tyndall Air Force Base.* ***Groundwater TCE/Vinyl Chloride Fact Sheet, Tyndall AFB.*** *Electronic correspondence from Tyndall AFB to EPA Region 4, August 2007. (see Paras. 22 and 26 of the Order)*

- *URS.* ***Semi-Annual Groundwater Monitoring Report, Study Area SS026.*** *August 2007. (see Para. 22 of the Order)*

- *CH2MHill.* ***Technical Memorandum: EE/CA Approval Memorandum for Proposed Non-Time Critical Removal Action at Site FR038, Revision 2, Tyndall AFB.*** *Proposed treatment and disposal for hazardous waste stockpiles using Enviroblend. November 2007. (see Para. 18 of the Order)*

Additional documentation available in Region 4 files that EPA relied upon to understand the conditions contributing to imminent and substantial endangerment at Tyndall AFB include:

- draft Records of Decision prepared by the Air Force for Landfills 6 and 7 (October 2006), Landfill 1 (January 2007) and Landfill 3 (January 2007);

- investigation work plans and reports for Landfill 5 (April 2007) and Fire Training Pit FT023 (January 2007), for example;

- an Air Force Land Use Control guidance document (Lynn Haven Defense Fuel Supply Point, January 2006); and

- Post-response action monitoring reports and Air Force briefings (Landfills 6 and 7, October 2007, for example).

With regard to the cases cited in part II, it is true that they all deal with the imminent and substantial endangerment standard found in RCRA. However, the cases cited do not support the broad statements made in the Air Force Supplemental Materials document. The decisions do carefully evaluate whether plaintiffs in these cases provided enough information and evidence to support a finding that an imminent and substantial endangerment existed so that the court would have the authority to order appropriate injunctive relief. Where the plaintiffs failed to make a sufficient showing, the courts did not grant the relief requested.

For example, the court in the *Price* case determined that while the plaintiff "may have a legitimate concern about the soil under her home, she failed to produce sufficient evidence to support her RCRA claim." The court did not issue a ruling, however, stating that "abatement actions are not warranted to address past threats" as suggested by the Air Force document: rather it found that "there is no imminent and substantial endangerment

at the present time because of the concrete barriers [cement slabs on which plaintiff's house sits]." Furthermore, "[t]he court is not convinced that, even if contaminants remain beneath the house, that the levels of contaminant are hazardous. In addition, repairs and/or renovations might not cause a release of contaminants. Mr. Vitale testified that the State knew before its cleanup about the cracks in the slab and did not think they were significant." The decision is based on a very fact-specific inquiry by the court; unless the Air Force is saying that at Tyndall AFB the contamination is covered by concrete barriers that effectively keep it sealed and prevent exposure, the *Price* decision does not provide the support it suggests.

Similarly, the *Abundiz* decision does not provide legally binding precedent for some general rule that after four years, evidence of an endangerment becomes obsolete. Instead, in that case and based on the specific facts before the court, the judge was not convinced that the river body in question "continues to be polluted as a result of the pipeline rupture" in a manner that would support an ISE determination (i.e., whether the MTBE and gasoline spilled into the creek was still present). Thus, it was not the age of the reports themselves that was at issue, it was whether the contamination continued to exist. Unless the Air Force has evidence that the contamination at Tyndall AFB has disappeared, the *Abundiz* decision is not illustrative and does not support its claim that the information contained in the assessment of the contamination is flawed. Furthermore, it is the Air Force's responsibility to clean up the contamination, not EPA's – the Region has not "ignored it or failed to act on this knowledge for 13 years," the Region has simply been unable to compel the Air Force to fulfill its responsibilities under CERCLA section 120 since the Air Force has refused to sign and comply with an FFA as required by statute.

Finally, the premise in the *OSI* case is that robust cleanup action is ongoing;[1] it is disingenuous to suggest that a court would believe an endangerment could be reduced if the federal government is present at a site but is not diligently carrying out cleanup work in a manner that is designed to address the risks posed by the contamination. While the Air Force may have spent money at Tyndall AFB, EPA (as the agency with expertise in these matters) believes more needs to be done, and it needs to be done quicker than the Air Force has been willing to do, in order to adequately protect human health and the environment.

**Issue 3: Current and Accurate Status of Sites/Units at Tyndall AFB**

Since the conduct of the RCRA Facility Assessment, Hazard Ranking Scoring, and subsequent finalization of Tyndall Air Force Base on the National Priorities List in 1997, our joint EPA-Air Force understanding of this Superfund site has continued to

[1] The remaining cases cited here do not directly support the first sentence in this last paragraph of part II. Rather, the decisions reflect fact-specific determinations that plaintiffs in these actions did not produce sufficient evidence to support an ISE determination necessary for the court to assert jurisdiction, in part because past cleanup work had already achieved its purpose. In contrast to specific facts presented by the cases cited by the Air Force, EPA does not believe the cleanup work at Tyndall AFB has taken care of the risks posed by the remaining contamination at the site.

evolve. A cursory review of the historical files shows that EPA and the Air Force have agreed on several occasions to re-evaluate the cleanup status of many of the sites listed in Appendix A of the Tyndall 7003 Order.

- For example, when the Air Force issued the *Phase I Comprehensive Site Evaluation Report* (April 2007) for munitions response areas at Tyndall Air Force Base last year, EPA learned that several of the newly discovered ranges overlap with other waste areas on base.
- Similarly, investigations of Shoal Point Bayou (OT029) in the last few years have found a previously unidentified landfill/drum burial area, and Air Force sampling in 2007 documented the highest concentrations of DDX in sediments to date.

In many cases, sites previously designated as "NFA" have been reopened for evaluation when new information about the types and locations of wastes, or other site conditions, has become available.

- For example, the Air Force assigned NFA status to Landfill 005 (LF005) in 1992. Over 10 years later, re-evaluation of the site information supporting the NFA determination finds Tyndall AFB implementing a supplemental remedial investigation in 2008 to determine the boundaries of the landfill, fill data gaps on surface water, sediment, and groundwater impacts, and evaluate the impact of potential munitions disposal or burial and munitions constituents from the colocated Former Munitions Storage Area (FMSA). The FMSA operated during the same time period as Landfill 005 and was only identified by the Air Force in 2007.
- Other examples of sites assigned NFA status by the Air Force, but reopened for additional investigation in support of eventual cleanup, include: LF001 (Wherry Landfill), LF003 (Beacon Beach Landfill), SS014 (Site 14-POL Area A), and SS019 (AAFES Service Station),

Clearly, our joint willingness to evaluate our past decisions in light of new information is absolutely critical to ensuring the protectiveness of our cleanup decisions.

EPA notes that the information provided by the Air Force regarding the status of sites/units at TAFB is inaccurate in some cases and in other instances appears to be an incomplete presentation of the facts as EPA knows them. Nevertheless, Paragraph 42 of Section VI, Work To Be Performed, of the RCRA 7003 Order, provides a mechanism for the Air Force to demonstrate to EPA how the Administrative Record for Tyndall Air Force Base supports the sufficiency and completeness of the work conducted to date in support of moving expeditiously forward to final remedy decisions.

- EPA notes that the Air Force has yet to achieve a single final cleanup decision for any area of concern at Tyndall AFB. Although several draft RODs were submitted to EPA during FY2007, EPA determined that Tyndall AFB has frequently skipped the required Proposed Plan and public notice requirements for ensuring public participation in remedy selection for several of these sites.

EPA defers to Paragraph 42 of the 7003 Order and does not attempt to address the scope of assertions posed by the Air Force in its response. Instead, selected responses are provided to underscore the importance of Paragraph 42 for resolving the status and providing a path forward for all of the units listed in Appendix A.

**A. Sites where EPA has concurred No Further Action is required**

IRP Sites 1 and 3. The EPA letter of December13, 2004, was issued in response to review of the Remedial Investigation Report (2004) for these areas of concern. Specifically, EPA's letter states that *"no additional remedial steps are required at these sites, unless new information warranting further consideration or conditions not previously known to EPA regarding the site are discovered."* EPA's 2007 comment letters on the draft (January 2007) RODs for Sites 1 and 3 identify new information warranting further consideration in support of remedy selection.

In addition, Air Force characterization of EPA's comments on the draft RODs for Sites 1 and 3 as "informal" is inaccurate. After EPA attempts to partner with the Air Force to resolve EPA concerns were unsuccessful due to lack of Air Force responsiveness, EPA sent extensive formal ROD comments to the Air Force via *Certified Mail/Return Receipt Requested* for Sites 1 and 3 on June 5 and July 18, 2007, respectively. To date, the Air Force has failed to address the concerns raised by EPA.

IRP Site 14. The EPA letter of December 13, 2004, was issued in response to review of the Remedial Investigation Report (2004) for this area of concern. Specifically, EPA's letter states that *"no additional remedial steps are required at these sites, unless new information warranting further consideration or conditions not previously known to EPA regarding the site are discovered."* In March of 2007, Tyndall AFB submitted for EPA and FDEP review a draft request for a Site Rehabilitation Completion Order (SRCO) per Chapter 62-770.680 of the Florida Administrative Code. During EPA's review of the SRCO (comment letter dated March 16, 2007) and subsequent review of the Administrative Record files, EPA identified conditions not previously known to EPA regarding Site 14. These conditions include (i) the sufficiency of the subsurface and groundwater investigations in the tank bottom disposal area, (ii) the failure to investigate the remaining 8 acres comprising Site 14 for environmental releases, (iii) the failure to specifically investigate potential releases from SWMU 46, the 6000 Area Shop "Slop" Waste Tanks located within the operational footprint of Site 14, and (iv) the intent of the Air Force to select a "no further action" remedy for soil and groundwater that leaves tank bottom wastes in place absent land use controls. Of particular concern, EPA is unable to find documentation in the Site 14 reports regarding the current operational status of, and sampling results for, at least one, and possibly as many as three, potable water wells within and around the Site 14 footprint. It does not appear from the site files that the Air Force has evaluated potential contaminant impacts on these water wells or, if these wells are out of service, documented proper abandonment of these wells to ensure that they do not serve as a future conduit of contaminants to groundwater.

Finally, the Air Force suggestion that EPA owes the Air Force comments on a draft ROD for Site 14 is inaccurate. In fact, rather than pursue a CERCLA ROD, Tyndall elected to pursue a final cleanup decision under 62-770 of the Florida Administrative Code.

IRP Sites 2, 25, 4, 9, 10, 12, 24. EPA's NFA letters of April 29 and July 25, 2002, relied on the sampling results of the Air Force Confirmatory Sampling Report (CSR, 2002). *As requested by the Tyndall AFB Remedial Project Manager in 2007, the current EPA RPM re-reviewed the Confirmatory Sampling Report.* EPA's current review found that the Air Force confirmatory sampling effort: (i) failed to locate and sample source areas (such as disposal pits); (ii) failed to identify waste unit boundaries in support of sampling and data interpretation; and (iii) appears to have collected landfill surface soil composite samples in the (presumably clean) cover material. Thus, there is significant uncertainty associated with location and nature of, and potential unacceptable risks posed by, the uncharacterized wastes that the Air Force proposes to leave in place with "NFA" at these sites. Monitoring and land use controls may be appropriate for one or more of these waste units.

The Air Force states that EPA recommended no further action for a number of waste units in the RCRA Facility Assessment (RFA) for Tyndall AFB.

- EPA's expectation when finalizing the RFA was that sites being addressed under the Air Force Installation Restoration or FDEP 62-770 UST programs would be evaluated for compliance with HSWA requirements at the time of confirmatory sampling or completion of a RCRA Facility Investigation. For example, although Site 20 (Former Facility 550 Waste Petroleum Products Storage Area) tanks were removed and closed under the FDEP 62-770 program, the groundwater contamination was deferred to the IRP program and is being investigated under the current SS026 Vehicle Maintenance Study Area.
- In some cases, the NFA recommendation was predicated on receipt by EPA of additional information from facility representatives (SWMU 31, 35, among others).
- In other cases, the integrity of the waste handling unit could not be evaluated during the 1994 Visual Site Inspection due to the below grade nature of the unit; thus potential releases from units such as paint shop waste trenches, aircraft maintenance area trenches, and lead acid battery draining pits, may not have been adequately evaluated to date (SWMU 40, 41, 43, among others).

**B. Sites at Which Significant Cleanup Actions Have Been Taken**

The Air Force notes that the RCRA 7003 Order fails to account for unilateral response actions taken in the last few years by the Air Force at eight Tyndall AFB sites. In each case, these cleanup actions have been taken in the absence of EPA concurrence on a Record of Decision and in the absence of EPA approval of remedial action work plans. When Tyndall Air Force Base embarked upon these response actions, they were advised by the Region that they did so at risk of EPA not concurring with the ROD when finally presented by the Air Force for EPA review. While these unilateral actions have likely

helped Tyndall AFB meet their 2007 Defense Planning Goals with the Department of Defense, it is not possible for EPA to evaluate, let alone agree with, the Air Force assessment that risks and hazards to people and environmental resources have been significantly reduced or eliminated at these eight sites.

- Example: The Air Force selected a remedy for the SS026 Vehicle Maintenance Study Area in May of 2003. Response actions implemented per the Air Force Remedial Action Work Plan (October 2005) were reported to EPA in 2007 to have been unsuccessful in fully addressing the source of contamination associated with the SS015 and SS026 subunits within this study area. As of February of 2008, the Air Force is proposing additional source characterization in support of future response actions to address LNAPL in soil and groundwater associated with the SS015 subunit. Further, the data suggest that primary source material persists underneath the adjacent building and continues to source the groundwater contaminant plume associated with the SS026 subunit.

In addition, EPA's review of post-response action monitoring reports generated by Tyndall AFB, including Air Force implementation of a Land Use Control (LUC) monitoring and reporting plan, indicate that the Air Force's voluntary cleanup activities do not meet EPA expectations for protectiveness.

- Example: Problems identified by EPA for correction in comments on the 3rd Annual (2006) Monitoring Report for Landfills 6 and 7 remain uncorrected a year later, as reported by the Air Force in the 4th Annual (2007) Report. Of particular concern is Tyndall AFB's decision not to address the security of the numerous monitoring wells in this network. The 4th Annual GW Monitoring report, like the 3rd Annual Monitoring Report, documents that the majority of the monitoring wells have remained unsecured for at least a full year. In fact, only 2 out of 26 wells in the network were found to be secure during the September 2007 well integrity check. In addition, unsecured wells, damaged casings, wells without ID tags, and "missing" wells are documented by the Air Force in 2006 and again in 2007. In EPA's view there are several possibilities: (i) appropriate corrective action was not taken by the Air Force after the 2006 report, and/or (ii) corrective action was taken, but Tyndall AFB has a problem with well vandalism at this location on the base, and/or (iii) the Air Force is not providing adequate oversight of the cleanup contractors at Tyndall AFB. Regardless, Tyndall AFB is not taking adequate measures to ensure that these wells do not become an inadvertent conduit for illegal disposal of wastes and subsequent groundwater contamination, and demonstrates an inability to implement a LUC program to ensure remedy protectiveness.

- Example: The LUC checklist for Landfill 6 and 7 is compromised by multiple reporting errors. These errors suggest a failure by the Air Force to ensure that a crosswalk is performed between field notes and information reported in the LUC checklist. In addition, the LUC checklist "Y/N" entries in the "Acceptable" column are at odds from a decision logic standpoint, and often appear to be in

error. Finally, anticipated corrective actions and a timetable for completion are not routinely identified for documented problems. These issues were identified in EPA's comments on the 3rd Annual Report but were still not addressed in the 4th Annual Report for Landfills 6 and 7, demonstrating an inability to implement a LUC program to ensure remedy protectiveness.

C. **Sites at which Remedial Investigations and Feasibility Studies have been conducted.**

Tyndall AFB is currently conducting several Remedial Investigations (RI) and Feasibility Studies (FS). These efforts are important for understanding the risks posed by the waste units to human health and ecological resources, but do not in themselves serve to mitigate those risks and hazards. For example, neither the Remedial Investigation (2002), nor the ATSDR Public Health Assessment (2004), nor the draft Feasibility Study (2007) for Shoal Point Bayou (Site 29) incorporate evaluation of the substantial amount of data collected since the 2002 RI Report. In fact, over a dozen post-RI reports have been issued since 2002. As of 2007, these additional data demonstrate a larger extent of contamination at much higher concentrations of DDT in bayou sediments than previously reported or considered when the human health and ecological risk estimates were conducted in 2002. Further, the RI was issued prior to discovery of a drum disposal landfill at Site 29 and the FS was issued prior to completion by the Air Force of landfill characterization activities in late 2007. In any case, EPA and the Air Force agree that cleanup will need to take place to protect human health and ecological resources from contaminants at Site 29.

**Issue 4: Military Munitions Areas Should Not be Included In the Order**

Please see Response to Issue 14 of Enclosure 1.

**Issue 5: Action Required Under the Order Is Not Related to the Abatement of ISE at Tyndall AFB**

EPA would first of all like to reassure the Air Force, and state for the record, that the Agency is careful not to waste its scarce resources and does not require wasteful or unnecessary expenditures in connection with cleanup actions by other federal agencies or private parties. In instances such as this, where there is scientific uncertainty or incomplete characterizations of the threats posed, EPA believes there is a sufficient basis, consistent with case law, to support an ISE finding.