DEPARTMENT OF THE AIR FORCE
WASHINGTON, DC

Office Of The Assistant Secretary

AUG 16 2005

SAF/IEE
1665 Air Force Pentagon
Washington DC 20330-1665

Mr. Timothy Swickard
Director
Dept. of Toxic Substances Control
8800 Cal Center Drive
Sacramento, CA 95826-3200

Dear Mr. Swickard

Enclosed are the materials that have been agreed upon to allow your concurrence on the Castle Source Control Operable Unit Record of Decision Part 3 (SCOU III ROD). Attachment 1 consists of a policy statement agreed to by the Air Force and California Department of Toxic Substances Control (DTSC) to address DTSC's concern over the funding of state oversight of Land Use Controls at Castle. A similar version will be issued as Air Force policy to cover other Air Force or former Air Force bases in California.

Also attached are the errata pages regarding the ecological monitoring language changes in the subject ROD. Your agency has previously reviewed and concurred upon the language changes. These pages are to be inserted into the ROD submitted to your agency on March 16, 2005. The attached policy and errata change pages resolve the two issues identified as preventing your concurrence on the SCOU III ROD. With these matters resolved, the subject ROD should be ready for final State and EPA signatures.

The Final (revised-second edition) Castle Source Control Operable Unit Record of Decision Part 3 was prepared and signed by the Air Force. Currently, DTSC is in possession of the Air Force original-signed ROD. In accordance with the agreed-to normal document transmittal process, the DTSC should sign the ROD and submit it to EPA for signature. In turn, the EPA will submit the signed original ROD (with revised pages inserted) to the Air Force. The Air Force will provide copies of the ROD containing all signatures to DTSC and EPA.

This correspondence is also being sent to Mr. Wayne Nastri, Regional Administrator for EPA Region IX.

If you have any questions, please contact Gerald Johnson at 703-696-5540, or the Castle Base Environmental Coordinator, Mr. Greg Gangnuss at (916) 643-6420 x112.

Sincerely

RICHARD ASHWORTH, Colonel, USAF
Acting Deputy Assistant Secretary of the Air Force
(Environment, Safety, and Occupational Health)

Attachments:
1. Policy Statement
2. Errata change pages

cc:
Lida Tan (EPA Region IX)
Carolyn Tatoian Cain (CA DTSC)
Marcus Pierce (CA RWQCB)
Kathryn Halvorson (AFRPA)
Gerald Johnson (AFRPA)

Air Force Policy Governing Property in California
With Land Use Controls (June 3, 2005) – CASTLE only

Air Force Policy Regarding Costs Associated with Land Use Controls

A. Pre-Transfer (property in California retained by the Air Force)

Costs incurred by the State of California in undertaking regulatory oversight of remedies selected in a Record of Decision (ROD) or equivalent decision document during Air Force ownership of the property will be addressed under whatever funding mechanism is in effect for the Department of Defense to cover such costs.

B. Post-Transfer (property in California transferring out of federal government control)

1. The Air Force will require as a condition of property transfer that the transferee make an arrangement acceptable to the State of California to cover the payment of State costs identified by the State of California pursuant to California Code of Regulations, title 22, Section 67391.1(h). It is anticipated that the transferee will normally assume these obligations; however, it may arrange for alternate mechanisms with State approval (for example, up-front lump-sum payment via agreement, third-party agreements, etc.).

2. The Air Force will identify who has responsibility for carrying out land use control obligations selected as part of a remedy in documents associated with the transaction. It will also identify in such documents who has the obligation to cover the State costs identified pursuant to California Code of Regulations, title 22, Section 67391.1(h). Such transaction documents could include, without limitation, the deed, the agreement underlying the transaction (for example, purchase agreement or economic development conveyance), or other documents that either run with the property or are legally binding.

3. State oversight costs directly associated with functions retained by the Air Force in implementing, maintaining, or monitoring land use controls selected as part of the remedy in the ROD or equivalent decision document via whatever funding mechanism is in effect for the Department of Defense to cover such costs (for example, conducting 5-year reviews or providing status reports on land use controls) will continue to be the responsibility of the Air Force.

4. State costs associated with a change in land use, exposure assumptions underlying the selected remedy in the ROD, or in land use controls after property transfer are the responsibility of the landowner or operator at the time of the change. Such changes would be conducted in accordance with the provisions in the State Land Use Covenant (SLUC).

5. If the transferee* fails to satisfy its obligations under state law associated with the SLUC, the State of California may enforce such obligations against the transferee. If there is failure of the selected remedy or a violation of selected remedy obligations, the State of California will notify the Air Force in writing of such failure and initially seek corrective action or other recourse from the transferee*, including recovery of its associated costs. If, after diligent efforts, the State of California is unable to get the transferee* to address the failure and pay associated costs, the State shall meet and confer with the Air Force to resolve re-implementation of the selected remedy or other necessary remedial actions to address failure of the selected remedy. Costs incurred by the State of California in undertaking regulatory oversight of remedies re-implemented by the Air Force will be addressed under whatever funding mechanism is in effect for the Department of Defense to cover such costs.

Notes

1. "Selected remedy" refers to a remedy formally selected in a Record of Decision (ROD) or equivalent decision document (for example, a Corrective Measures Study or Corrective Measures Implementation plan under RCRA), or such remedy as amended through an Explanation of Significant Difference, ROD Amendment or equivalent document.

* Or other entity accepting such obligations

AF/BoP MOU establishes that BoP may use groundwater underlying the BoP parcel if and to the extent that such use conforms to and complies with all applicable laws and regulations; (3) the AF/BoP MOU establishes access for the Air Force and the BCT and (4) elements of prison security (e.g., patrolled security fencing) restrict the potential for human exposure to site contamination. In addition, implementation of the selected remedy will not threaten sensitive ecological habitats.

This remedy adds ICs to the ongoing post-closure maintenance and monitoring for LF-4 and LF-5, as specified in the following existing primary documents:

- *Closure and Post-Closure Maintenance Plan for Castle Airport Landfills* (LF-4; Jacobs, 1997f)
- *Closure and Post-Closure Maintenance Plan for Castle Airport Landfills 1, 3 and 5* (Jacobs, 1998c)
- *Landfill 4 and Landfill 5 Closure and Post-Closure Maintenance Plan Update* (Jacobs, 2000b)

Within 180 days of the signing of this ROD, the Air Force will submit updated versions of these documents to include the ICs as outlined in Section 2.9.1 of this ROD.

Post-closure landfill gas monitoring at both landfills will continue to confirm lack of landfill gas migration. Post-closure groundwater monitoring will also continue for LF-4 and LF-5. Post-closure groundwater monitoring consists of two components: corrective action monitoring and detection monitoring. Corrective action monitoring addresses contaminants already in groundwater, i.e., releases prior to capping of the landfills; detection monitoring addresses any new releases from the landfills, i.e., releases subsequent to capping. The post-closure monitoring programs for landfill gas and groundwater are described in Sections 2.8.1.3 (LF-4) and 2.8.2.3 (LF-5).

Long-term ecological monitoring at LF-5 will consist of wetlands invertebrate and plant surveys every five years for up to 30 years. In general, to ensure site contaminants have not impacted wetland habitats, plant and invertebrate surveys of contaminated and uncontaminated wetlands will be conducted. Evaluation of survey results will depend upon three measurements: plant abundance, plant diversity and invertebrate (fairy shrimp) abundance. If results show that these three factors are not statistically lower (at a 0.05 significance level) in the contaminated wetlands, then it will be concluded that there is no

impact and monitoring can thus be discontinued, in mutual agreement with the Air Force, EPA and DTSC. If an impact is observed, then the Air Force (in consultation with EPA and DTSC) will evaluate potential remedial alternatives.

2.12.2 Disposal Pit 9

The selected remedy for DP-9 is no further action. There is no cost associated with this remedy. Justification for a no further action determination is as follows:

- The 20-plus soil borings installed during the SCOU RI provided no evidence of waste disposal (physical or chemical) at the site.
- No VOCs, SVOCs or petroleum hydrocarbons (TVPH/TEPH) were detected in soil or soil gas samples from DP-9 at concentrations exceeding HHRA RAOs; one sample result for cadmium from 20.5 feet bgs (50.3 mg/kg) exceeded the WQSA threshold (43.7 mg/kg) but, as a single, isolated detection, is not considered site contamination.
- Two soil samples contained arsenic at concentrations exceeding the Castle AFB TBV of 9.9 mg/kg. The arsenic concentration in these two samples only marginally exceeded the TBV (10.0 mg/kg and 10.8 mg/kg) and the sample containing 10.8 mg/kg arsenic was collected from a depth greater than 15 feet bgs (15.5 to 16.5 feet bgs). These arsenic detections, and other metals marginally exceeding TBVs but not HHRA RAOs or WQSA thresholds, were not considered site contaminants.
- Sampling results from the LF-5 data gap investigation documented that there is no shallow or deep soil gas contamination exceeding WQSA thresholds in the vicinity of DP-9. The START evaluation performed for the LF-5 site determined that SVE was not warranted outside of the capped area.

2.12.3 Earth Technology Corporation 8

The selected remedy for ETC-8 is excavation and off-site disposal to remove all contaminated soil that exceeds risk-based RAOs. The estimated cost for excavation and disposal at ETC-8 is $700,000. The approximate area affected by the selected remedy is shown on Figure 2-11.

As described in Section 2.8.4.3 a removal action intended to clean up PAH-contaminated soil to risk-based RAOs was completed in 2000. The removal action achieved cleanup of PAH-contaminated surface soil in unpaved areas north of Buildings 1212 and 1213, but did not address soil beneath the roadway that transects ETC-8. Based on the area of the roadway and the results of recent excavation delineation sampling, approximately 5,200 yd^3 of soil exceeds risk-based RAOs. Removal of this soil will allow for unrestricted reuse of the ETC-8 site.

2.12.4 Earth Technology Corporation 10

The selected remedy for ETC-10 is ICs to prevent unacceptable human health risk by prohibiting use of the site without Air Force approval and long-term ecological monitoring. ICs are the only alternative identified during the FFS that satisfies both threshold criteria: (1) protection of human health and the environment and (2) compliance with ARARs. Although community opposition to ICs is acknowledged, excavation and disposal was rejected because it would result in destruction of wetlands inhabited by endangered species and thus, would not be protective of the environment. The estimated cost for ICs for ETC-10 is $15,000 per year. The estimated cost for long-term ecological monitoring at ETC-10 is $3,000 every five years. The approximate area affected by ICs is shown on Figure 2-14; long-term ecological monitoring will be conducted in the included and adjacent wetlands shown on Figure 2-13 and on Plate 1 (Appendix A).

Long-term ecological monitoring at ETC-10 will consist of wetlands invertebrate and plant surveys every five years for up to 30 years. In general, to ensure site contaminants have not impacted wetland habitats, plant and invertebrate surveys of contaminated and uncontaminated wetlands will be conducted. Evaluation of survey results will depend upon three measurements: plant abundance, plant diversity and invertebrate (fairy shrimp) abundance. If results show that these three factors are not statistically lower (at a 0.05 significance level) in the contaminated wetlands, then it will be concluded that there is no impact and monitoring can thus be discontinued, in mutual agreement with the Air Force, EPA and DTSC. If an impact is observed, then the Air Force (in consultation with EPA and DTSC) will evaluate potential remedial alternatives.

ETC-10 and its associated wetlands are located within the BoP United States Penitentiary, Atwater complex, and public access, including residential use, is prohibited. ICs are currently in place and fully implemented as follows: (1) the AF/BoP MOU precludes site alterations that would interfere with IAG or IRP activities without notification of EPA, DTSC and the Air Force and approval of the Air Force; (2) the AF/BoP MOU establishes access for the Air Force and the BCT; (3) other than access required pursuant to the IAG/IRP, the BoP's *Preservation Area Mitigation and Management Plan* (Berger, 1998) restricts access to activities that are necessary for implementation of the plan and (4) elements of prison security (e.g., patrolled security fencing) restrict the potential for human exposure to site contamination. In addition, implementation of the selected remedy will not threaten sensitive ecological habitats. ICs will be maintained at ETC-10 until soils are at levels that allow for

unrestricted use and exposure. Modification or termination of these ICs requires Air Force, EPA and State of California approval.

2.12.5 Fire Training Area 1

The selected remedy for FTA-1 is SVE and bioventing, cap maintenance and monitoring, excavation and disposal, long-term ecological monitoring and ICs. An SVE removal action was implemented at FTA-1 in 1996 and continues. Locations where the TVPH/TEPH RAO was exceeded prior to SVE will be resampled after SVE has attained VOC RAOs and the rate of TVPH removal has dropped to low and stable levels. Bioventing will be implemented, in consultation with the BCT, only if TPH RAOs are still exceeded upon completion of SVE and only to the extent necessary to attain the TPH RAOs. Completion of bioventing will be based on soil sampling to confirm TPH RAOs have been achieved. Capping, the preferred alternative for non-VOC contamination, was undertaken as part of the SVE removal action. Long-term cap maintenance and monitoring was implemented following construction and has been conducted in accordance with cap maintenance and monitoring procedures in the CPCMP for LF-5 (Jacobs, 1998c). Within 180 days of the signing of this ROD, the Air Force will submit a revised CPCMP to include cap maintenance and monitoring at FTA-1. This revised plan will establish the same cap maintenance and monitoring procedures now used for LF-4 and LF-5 for the FTA-1 cap. As part of cap maintenance and monitoring, groundwater monitoring for VOC and fuel COCs will be conducted until the RAOs for these COCs are attained by the SVE/bioventing components of the remedy. Prior to cessation of groundwater monitoring at FTA-1, a round of groundwater sampling will be conducted to support the demonstration that no COCs (VOCs, fuels, metals) that originally exceeded water quality limits in the vadose zone pose a threat to water quality as specified in 27 CCR, Subchapters 3 and 5 (Appendix D). If the results demonstrate that water quality limits will not be exceeded, groundwater monitoring will be discontinued.

The estimated cost for the SVE/bioventing action (in operation since 1996) was $2,600,000. The estimated cost for cap maintenance and monitoring and groundwater monitoring at FTA-1 is assumed to be less than $10,000 per year. The estimated cost for excavation and disposal at FTA-1 is $50,000. The estimated cost for long-term ecological monitoring at FTA-1 is $3,000 every five years. The estimated cost for ICs for FTA-1 is $15,000 per year. Approximate areas affected by the various remedy components are shown on Figure 2-15 and Figure 2-16 (excavation areas only).

The FTA-1 FFS established that the existing cap meets criteria (design, location and dimensions) for the capping alternative, with the exception of approximately 150 yd^3 of soil that exceeds ecological risk assessment RAOs. The cap in place at FTA-1 is equivalent to the Class II/III cap installed at Castle AFB consolidation landfills (LF-4 and LF-5) and, in conjunction with the other elements of the selected remedy, will provide effective protection of groundwater and eliminate exposure and migration routes. As noted above, within 180 days of the signing of this ROD, the Air Force will submit a revision to the LF-5 CPCMP to include similar cap maintenance and monitoring at FTA-1. This plan will establish the cap maintenance and monitoring procedures now used for LF-5 for the FTA-1 cap.

Excavation and disposal will address three areas identified in the FTA-1 FFS where contaminated soil exceeding ERA RAOs for cadmium and nickel lie outside the existing cap. These areas are shown on Figure 2-16. As shown, two of these areas overlap the southern boundary of the existing cap and the third overlaps the cap's boundary with the Building 1888 compound. To address potential ecological threats, the selected remedy includes excavation of these areas and off-site disposal of the contaminated soil (approximately 150 yd^3).

Long-term ecological monitoring at FTA-1 will consist of wetlands invertebrate and plant surveys every five years for up to 30 years. In general, to ensure site contaminants have not impacted wetland habitats, plant and invertebrate surveys of contaminated and uncontaminated wetlands will be conducted. Evaluation of survey results will depend upon three measurements: plant abundance, plant diversity and invertebrate (fairy shrimp) abundance. If results show that these three factors are not statistically lower (at a 0.05 significance level) in the contaminated wetlands, then it will be concluded that there is no impact and monitoring can thus be discontinued, in mutual agreement with the Air Force, EPA and DTSC. If an impact is observed, then the Air Force (in consultation with EPA and DTSC) will evaluate potential remedial alternatives.

FTA-1 and its associated wetlands are located within the BoP United States Penitentiary, Atwater complex, and public access, including residential use, is prohibited. ICs are currently in place and fully implemented as follows: (1) the AF/BoP MOU precludes site alterations that would interfere with IAG or IRP activities without notification and approval of the Air Force (the Air Force will obtain EPA and State of California approval of any requested alterations prior to issuing an approval notification to the BoP); (2) the AF/BoP

MOU establishes that BoP may use groundwater underlying the BoP parcel if and to the extent that such use conforms to and complies with all applicable laws and regulations; (3) the AF/BoP MOU establishes access for the Air Force and the BCT and (4) elements of prison security (e.g., patrolled security fencing) restrict the potential for human exposure to site contamination. In addition, implementation of the selected remedy will not threaten sensitive ecological habitats. ICs will be maintained at FTA-1 until soils are at levels that allow for unrestricted use and exposure. Modification or termination of these ICs requires Air Force, EPA and State of California approval.

2.12.6 Earth Technology Corporation 12

Long-term ecological monitoring is the selected remedy for ecological risk to wetlands at ETC-12. The estimated cost for long-term ecological monitoring at ETC-12 is $3,000 every five years. The wetlands affected by the remedy are those within and immediately adjacent to ETC-12 as shown on Plate 1 (Appendix A).

Long-term ecological monitoring at ETC-12 will consist of wetlands invertebrate and plant surveys every five years for up to 30 years. In general, to ensure site contaminants have not impacted wetland habitats, plant and invertebrate surveys of contaminated and uncontaminated wetlands will be conducted. Evaluation of survey results will depend upon three measurements: plant abundance, plant diversity and invertebrate (fairy shrimp) abundance. If results show that these three factors are not statistically lower (at a 0.05 significance level) in the contaminated wetlands, then it will be concluded that there is no impact and monitoring can thus be discontinued, in mutual agreement with the Air Force, EPA and DTSC. If an impact is observed, then the Air Force (in consultation with EPA and DTSC) will evaluate potential remedial alternatives.

2.12.7 Landfill 3

Long-term ecological monitoring is the selected remedy for ecological risk to wetlands at LF-3. The estimated cost for long-term ecological monitoring at LF-3 is $3,000 every five years. The wetlands affected by the remedy are those within and immediately adjacent to LF-3 as shown on Plate 1 (Appendix A).

Long-term ecological monitoring at LF-3 will consist of wetlands invertebrate and plant surveys every five years up to 30 years. In general, to ensure site contaminants have not

impacted wetland habitats, plant and invertebrate surveys of contaminated and uncontaminated wetlands will be conducted. Evaluation of survey results will depend upon three measurements: plant abundance, plant diversity and invertebrate (fairy shrimp) abundance. If results show that these three factors are not statistically lower (at a 0.05 significance level) in the contaminated wetlands, then it will be concluded that there is no impact and monitoring can thus be discontinued, in mutual agreement with the Air Force, EPA and DTSC. If an impact is observed, then the Air Force (in consultation with EPA and DTSC) will evaluate potential remedial alternatives.

2.12.8 Ecological No Further Action Sites

The selected remedy for ecological risk at all SCOU sites other than DP-8, DP-8A, ETC-10, ETC-12, FTA-1, LF-3, LF-5 and Landfill 5 Trenches (total of 225 SCOU sites) is no further action. There is no cost associated with this remedy. These sites are no further action because they completely lacked ecological habitat or contained only habitat that was too marginal to be of concern (i.e., sites covered with buildings, roads, parking lots and urban lawn); because removal actions based on human health and WQSA concerns had substantially reduced the potential risks to ecological receptors or because additional data and/or ERA evaluation determined that the site risk to ecological receptors was not significant.

2.13 STATUTORY DETERMINATIONS

Statutory aspects of the selected remedies for each of the SCOU sites or group of SCOU sites addressed in this ROD are presented separately in the following subsections.

2.13.1 Landfill 4 (including DP-5 and DP-6) and Landfill 5 (including DP-8, DP-8A and Landfill 5 Trenches)

The selected remedy for LF-4 (including DP-5 and DP-6) and LF-5 (including DP-8, DP-8A and Landfill 5 Trenches) is cap maintenance and monitoring and ICs, and (for LF-5, DP-8, DP-8A and Landfill 5 Trenches only) long-term ecological monitoring. Per the statutory requirements of CERCLA Section 121, this remedy will adequately protect human health, will comply with ARARs and is cost-effective, although treatment is not a component of this remedy. LF-4, LF-5 and their associated sites, with the exception of DP-9, have undergone waste consolidation and capping through removal actions. Post-closure maintenance and

monitoring, including groundwater detection monitoring, was initiated under the removal action and is ongoing in accordance with the approved CPCMPs for LF-4 and LF-5. The CPCMPs will be updated as appropriate to incorporate IC elements as described in Sections 2.9.1 and 2.12.1.

The selected remedy for LF-4 (including DP-5 and DP-6) and LF-5 (including DP-8, DP-8A and Landfill 5 Trenches) will result in the following:

- Existing or potential risks posed by the sites through each pathway will be reduced or controlled by the response action.
- Implementation of the selected remedies will not pose unacceptable short-term risk or cross-media impacts.
- The remedies provide adequate protection of the environment.

ARARs for the selected remedy (cap maintenance and monitoring; ICs and [for LF-5, DP-8, DP-8A and Landfill 5 Trenches only] long-term ecological monitoring) are listed in Table 2-18.

The selected remedies for LF-4 (including DP-5 and DP-6) and LF-5 (including DP-8, DP-8A and Landfill 5 Trenches) will be subject to five-year reviews. The next five-year review is scheduled for 2008.

2.13.2 Disposal Pit 9

The selected remedy for DP-9 is no further action, based on the determination that no remedial action, treatment or otherwise, is warranted given the limited contamination at the site. No further action determinations conform to ARARs by definition, as there is no action.

2.13.3 Earth Technology Corporation 8

The selected remedy for ETC-8 is excavation and off-site disposal. Per the statutory requirements of CERCLA Section 121, this remedy will adequately protect human health, will comply with ARARs and is cost-effective, although treatment is not a component of the remedy. ETC-8 has previously undergone excavation and on-site disposal under removal action authority. The current remedy addresses potentially PAH-impacted soil at the site not removed during the removal action.