

**MEMORANDUM FOR THE RECORD**

**TO: MG Stephan Tom**

**17 May 2011**

**FROM: Dr. Jay Silverstein**

**RE: Scientific Integrity of Archaeological Fieldwork**

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## I. Summary

There appears to be a pattern of malfeasance of duty and abuse of scientific ethics with regard to archaeological methods in work conducted by the JPAC CIL. The impact of these deficiencies includes:

1. Putting JPAC in awkward situations in which we are unable to provide families, NGOs, and congress with the fullest and most complete and scientifically valid findings and accounting from our field investigations. In some cases, we are unable to answer fundamental questions like, „how do we know there are no Americans in that grave?“ or „could those remains uncovered been American?“
2. Unsubstantiated determinations of site status because the scientific data did not support recommendations and conclusions.
3. Considerable wasted funds for missions that have been pushed forward merely to compensate for inadequate earlier work.
4. Negative impacts on our ability to track our activities and thus eliminate site locations, record archaeological context of our work, and elaborate on our recovery efforts.
5. Putting our practices at odds with our own policies and directives and jeopardizes our standing within the scientific community.
6. Negatively impacting our ability to make recoveries.
7. Undermining credibility and scientific integrity of JPAC.
8. Led to abuses of the US Government Merit System to control personnel and shield CIL archaeological work from outside review and internal scrutiny.
9. Putting JPAC in a situation in which conduct of our operations appears to be in contempt of outside review.

Three cases are discussed in this study. These cases were chosen because Dr. Silverstein personally worked on the cases and is intimately familiar with many aspects of the cases. Cases presented here are from the Southeast Asia conflict, the Korean War, and from WWII. There has been considerable discussion by JPAC personnel and former JPAC personnel about other cases. Any in-depth investigation should certainly extend beyond the cases detailed here.

Case 1. Covers a series RTs covering two REFNOs associated with the failed invasion of Koh Tang Island, Cambodia, 1975, that resulted in the accidental leaving of three marines alive on the island. This case was extremely sensitive because of the initial resistance of our government to acknowledge leaving men behind and because of very active family and state legislature interest. The malfeasance in this case centers on the failure to fully record work executed, some of which may cover the only evidence thus far related to the possible fate of one of those that was left behind.

Case 2. Covers a case at Upo Lake, ROK, in which a failure to adequately report work conducted inhibited the ability for an archaeological review of the site and led to an unnecessary mission wasting time, money, and manpower.

Case 3. Is based on the 2010 CIL excavations at Tarawa Atoll, Kiribati, in which poor methods and failure to conduct proper scientific work on numerous levels led to extremely suspect work and

conclusions. This is compounded by a willingness to ignore best practice and twice cutting investigative teams that would have employed best standard methods in the search and recovery effort. The now Deputy Director of the CIL even acknowledged to me that the CIL was not using the best available methods but that he would not speak up to contradict or break solidarity with other lab managers. This is further exacerbated by the Recovery Leader public announcing that he was „proving History Flight wrong“ as a guiding research principle. This flies in face of the scientific method and the necessity of a researcher to approach a testable hypothesis by trying to prove it so that if there is a failure it is not a matter of method, but of the hypothesis. When that statement is combined with inadequate methods and a purposeful refusal to use methods known by the best experts in the field to offer the best chance of recovery, it casts serious doubts on the legitimacy of JPAC as a scientific recovery organization and invalidates conclusions and findings based on that research.

## **II. Note on Archaeological Reporting:**

The problems discussed here include failure to complete mandatory and necessary reports and in scientific misconduct in the practice of archaeology. Personnel in the Lab are regularly counseled and penalized in evaluations for such conduct; however, this is in sharp contrast to the treatment of management-level investigators listed in these cases. Many CIL investigators have noted that the investigator in the first two cases has received exceptional evaluations and far above average raises and promotions.

The protocol for reporting on site excavations includes two reports that fall on the Recovery Leader (RL), the Detailed Report of Excavation or Excavation Summary Report (DRE or ESR) and the Search and Recovery Report (SAR). The DRE and post-circa 2007 ESR are message traffic format summaries meant to give preliminary information to the J2, the command, Washington, and the accounting community (referenced in CIL SOP 3.1.1). The SAR is a technical scientific report that provides the full accounting of methods, findings, and recommendations from an excavation.

If a site remains open at the end of a mission, the RL is to complete an interim SAR, subject to the same standards and review as a full SAR (CIL SOP 2.0). This provides a starting point for any following mission and provides an opportunity for peer-review of the work already completed (see CIL SOP 4.1). Current guidelines established by the CIL are that a SAR should be ready for submission for peer-review within five days of returning from the field. DRE/ESR should generally be submitted in draft while the RL is in the field or within 72 hours of returning from the field.

## **III. CASE I: RENO 1998; 2003**

The cases from Koh Tang Island are particularly sensitive because of the tragedy of three Marines being left alive on the island and because of accusations that the US government was reluctant to release information on the incident. The families of some of those left behind, particularly LCpl Joseph Hargrove, have never fully trusted the US government as a result of this incident. Because of this, they worked with the North Carolina House of Representatives to publically urge the DOD to recover the missing men.

The fate of the three men from REFNO 1998 has not yet been determined, but some of the best leads were excavated in 1999. Two sites were excavated in 1999, Case 1998A and Case 1998B. A single

DRE (Appendix A) was written for both sites. An SAR was completed for one site (1998B-Appendix B), but not for the other site (1999A). This leaves a serious void in our record on this case and makes it impossible to answer questions with any authority or scientific validity. According to the DRE (Appendix A:p.6) (for 1999A), *“THE ANTHROPOLOGIST OBSERVED A SINGLE PIT FEATURE IN THE EXCAVATION FLOOR WHICH CORRESPONDS NEARLY EXACTLY IN TERMS OF SIZE, SHAPE, AND ORIENTATION TO THE WITNESS DESCRIPTION OF THE BURIAL PIT DUG IN 1975”* and *“THE TEAM RECOVERED ONE POSSIBLE SET OF WIRE HANDCUFFS THAT COULD POSSIBLY RELATE TO CASE 1998”*. In other words, while the site may have been highly disturbed, this archaeological context may be the best data available related to the fate of the missing Marines. Failure to record the results of the excavation with scientific rigor is a clear violation of standard procedures of the CIL and a failure to meet the standards and responsibilities granted to CILHI/JPAC for the accounting of missing Americans. It also makes it difficult to systematically track our efforts and locations where we have worked. Failure to complete work in important cases like this are serious deficiencies and reflect directly on the credibility of our organization to conduct this mission.

During the same battle, on the east shore of the island our forces took considerable casualties, with two helicopters being shot down (REFNO 2003). Some remains have been recovered, but the case remains open with several still unaccounted for. Because we lack specific information on the possible fate of those missing, systematic well-documented archaeology is required to track where we have excavated. When Dr. Silverstein began work there in 2008 he was aware that excavations had occurred in 1999 and 2001, but there were no search and recovery reports (see Appendix C for the DREs). The RL/A who had failed to complete his reports promised to give Dr. Silverstein a sketch map of where he had dug in Jan/Feb 2001; however, he was unable to find this by the time of Dr. Silverstein’s deployment and they do not seem to be appropriately archived since. By fortune, Mr. Maves visited the island during my work and identified general areas where the earlier RL/A had excavated. Aside from the issues discussed above, such voids in our record seriously hamper current and future efforts at recovery and have and will result in the outlay of resources to redo and record work that had already been done. During the 2008 mission Dr. Silverstein conducted further excavation on three cases on Koh Tang Island, Case 1998, Case 2003, Case 2038. During the course of the investigation Dr. Silverstein set a cement datum in place to facilitate future mapping and tracking of excavations on the island. The work performed in 1999 and 2001 is not traceable and could conceivably be excavated again after those with personal knowledge retire from our organization (Appendix D for 2008 SAR reports by Silverstein). See the Table below for a list of excavations associated with these REFNOs and the status of reports.

Mission	REFNO	Dates	Investigator	Report Status
08-2CB	1998	16 Jan-26 Feb 2008	Silverstein	Complete
99-2C	1998B	26 Mar-4 Apr/2-5 Dec 2001	Byrd	Complete Possible remains
99-1C	1998A	-29 March 1999	Byrd	DRE only Possible remains recovered
98-1C	1998	27 Jan-5Feb	Harrington	Complete
96-3C	1998	20 Apr-11 May 1996	Moore	Complete
01-1C	1998	11-28 Jan 2001	Wills	DRE only
08-2CB	2003	16-Jan-26 Feb 2008	Silverstein	Complete Possible remains Recovered
99-1C	2003	7 Mar-1 Apr 1999	Byrd	DRE only
96-1C	2003	28 Oct-12 Nov 1995	Law	Complete Possible remains recovered

#### **IV. CASE II: FSC 118-F**

The case in question was first excavated from 25-30 April 2007. During this time the RL/A conducted an excavation using a mechanical excavator. Upon completion of the excavation, and upon return to Hawaii from the mission, the RL/A was issued a case number for his report, CIL 2007-091 and the RL/A then should have submitted the required Search and Recovery (SAR) report covering the methods, data recorded, and scientific findings at a professional level consistent with the standards outlined in the CIL SOP. This report along with the original field notes and peer-review comments would then be entered into the permanent record at the CIL. Instead, even the simplified message traffic known as an Excavation Summary Report (ESR) which is purposefully devoid of details about field operations does not appear to have been completed (Appendix E).

From 26 May to June 4, 2008, Dr. Silverstein was assigned to the same case to finish the work begun by the previous RL/A. No SAR report was available for review and only a verbal description from the previous RL/A was given, consisting of the recommendation to dig deeper and to shore up the walls with braces because of the presence of unstable fill. Special equipment was rented and transported to South Korea for this purpose. Upon beginning the work by re-excavating the trench excavated in 2007, Dr. Silverstein realized that the soil matrix consisting of modern fill and the contours of the slope were not consistent with previous assessment. It was apparent that there had been considerable change to the topography since the Korean War. Discussions with local people and a visit to the town government offices confirmed that the area recommended for excavation was illogical because several meters of fill including modern garbage had been placed on the slope changing the topography (Appendix F, SAR). This meant that the location of the trench was a considerable distance from the area described by the witness as containing the burial. Had there been an interim report that was peer-reviewed by a competent archaeologist, the presence of modern fill and the aspect of the site on the slope in conjunction with the witness statement would have made it apparent that the excavation was situated in the wrong location. Likewise, had Dr. Silverstein had access to the required report, he would have been able to assess this prior to committing the team to the excavation. The resultant deployment of the team to the field including per diem, hotel costs, transportation, and expenses associated with renting a mechanical excavator and bracing equipment would in all likelihood have been avoided.

#### **V. CASE III: CIL 2010-158, TARAWA**

The NDAA 2010, SEC.544 reinvigorated JPAC research at Tarawa following from the DOD interpretation of the following text:

*(4) encourages the Department of Defense to review this research and, as appropriate, pursue new efforts to conduct field studies, new research, and undertake all feasible efforts to recover, identify, and return remains of members of the Armed Forces from Tarawa.*

This was included in the NDAA in part because various independent researchers including History Flight and Bill Niven felt that JPAC was unresponsive to their data and they put forth their data to Congress for review. While overstating their data, there was sound scientific evidence warranting further investigation

using appropriate methods. As a result a hasty IT was put together led by MAJ Polacek, Dr. Silverstein, and Mr. McDermott in the late summer of 2009. While the scope of the investigation was limited, they confirmed to the best of their ability the locations indicated in the third party reports, many of which had been identified by ground penetrating radar (GPR) operated by a contractor hired by History Flight. Because of inaccuracies in the position of the data, both because of an equipment malfunction during the History Flight collection of the data and because of the innate error in maps and mapping equipment, it was known that there was at least 5-10 m error in the data. The data collection and interpretation, while shown to be accurate in most cases, was not post-processed and not well-georeferenced with historical records and imagery (most of which was only available in non-georeferenced format). These limitations were well known and discussed during the EDB and at other occasions. Five cases were pre-EDB'd by Dr. Fox, Dr. Silverstein, and the J2. These were put to EDB and set for an RT scheduled for the end of FY10. At OPT 1, Dr. Giannotta requested that an IT element be added to the mission to include Dr. Johnson, Dr. Silverstein, and a geophysicist (Dr. Conyers, a world leader in use of GPR for locating graves). This plan was agreed to during that meeting. At OPT 2, the RL/A, and MAJ Guthrie (J3) decided to pull the IT element without consultation or notification of the J2. Upon learning of this, Dr. Silverstein explained in numerous communications that geophysical survey was the best and most practical method for identifying possible burial locations given the circumstances, limitations of the History Flight, photogrammetric, and historical data, but in the end was told that no geophysical survey equipment would be allowed on the island while the RL/A was there because he did not want it there, even for use in locations other than those slated for excavation.

Just prior to the mission, Dr. Silverstein was invited to go to on the Tarawa mission as an IT element. Dr. Silverstein again contacted Dr. Conyers and found that he was available. The Dr. Belcher then met with Dr. Silverstein in May/June 2010 and said that the RL did not want GPR on the island. Dr. Silverstein explained that since there were no visible markers on the surface due to remodeling and dense settlement there was no survey to be completed and no features that could be observed through conventional surface survey and therefore no reason for a J2 site survey specialist to be deployed if they could not use the appropriate methods. The basic interviews of witnesses associated with the unilateral turnovers and the creating the chain of custody for unilateral evidence could be conducted by the RL/A. Dr. Silverstein said that it would be a waste of taxpayer money to include him on the mission.

From 8 August to 20 September 2010, a JPAC RT conducted excavations on Tarawa at five sites (KR-00017, KR-00019, KR-00020, KR-00021, KR-00022). Mark Noah of History Flight had offered to come out to Tarawa with the RT to show exactly the locations referenced in his reports but this was refused. The resultant work from the 10-1KR Field Activity is rife with methodological irregularities and ethical violations. On 17 February 2011, based on the recommendation of the RL/A, the command closed all excavated sites.

## **VI. A Note on the Status of the 10-1KR Report (Appendix G)**

JPAC executed the 10-1KR RT mission from 8 Aug-20 Sep 2010. Since the excavation report is crucial to the Research and Analysis of U.S. losses on Tarawa, numerous requests have been made by members of the J2 and other sections for a final draft of the report. A non-final draft was given in January 2010 and again in March. When pressed, the CIL has said they could not name a date for the final report to be complete. The draft is notably lacking in details that would be expected in a final scientific report including precise dimensions and locations of some excavations, detailed drawings of burials,

evidence tables, witness interview details, and other minor omissions (Appendix G). In additions, there were at least two unilateral turnovers of remains (CIL 2010-150 and CIL 2010-151). Normally these are accompanied by Additional Information Reports (AIR) specifying where they came from, circumstances of recovery, witness interviews, inventories, etc. Apparently no such documentation was made.

## **VII. Summary of Concerns with 10-1KR Report**

A litany of methodological and possible ethical issues are associated with the 10-1KR mission and the Draft report, CIL 2010-158-R:

- (1) Site KR-17 does not appear to have been excavated in the recommended area. The area recommended in EDB was clearly demarked by a perimeter wall and consistent with expected and reasonable behavior of someone making a secondary burial from a believed WWII military context. What appears to be a leading interview with the witness appears to have been used to justify excavations outside of the recommended area even though it was known that this was an active local cemetery (see Appendix H, Map 1).
- (2) Trenching method was used to search for burials. The method is inappropriate because of the possibility of running parallel to burial trenches are passing between individual burial features. While some burials appear to be trench burials, others from November 1943 appear to be isolated burials. The imprecise locations of where these burials are and of what type might be at any location makes the use of trenching a poor method (see CIL SOP Section 2, subsection 4.2.2.2; see Appendix H Map 2).
- (3) Primary context articulated burials are generally mapped in position to facilitate context analysis. This does not appear in the draft report available at the time of this assessment.
- (4) Apparently skeletal elements were taken as samples from some burial contexts. This is not explained in detail in the report and it also defies principles of scientific integrity. If a sample is taken, presumably it is to prove or demonstrate something that is subject to question. If a human remains sample is taken presumably there is a possibility that it is from the remains of U.S. personnel. If so, the chain of custody of the rest of the remains has been compromised and the status and fate of the remains is now in jeopardy. The report includes no specifics about which individuals or the specific context from which these remains were taken. There is no provision in the report for replacement of the sample remains with the individual they were taken from.
- (5) Sample skeletal elements removed from an articulated burial context is a questionable moral and ethical practice. Disassociation of remains may be considered a desecration and disrespect of the buried subjects and should certainly be reviewed by the American Anthropological Association and/or Register of Professional Archaeologists for violation of ethical standards regarding the treatment of human remains.
- (6) Race was determined by assessment of photographs of remains sent to the CIL. The results of these assessments were used to classify mass graves as Japanese. Photographic assessment does not appear to be a practice consistent with the rules of best evidence given that there was a reasonable option for the collection of the remains for analysis in a Forensic Review either in country or at the CIL. That it would be too much work to excavate the graves, while presenting a rationale for not completing an excavation, does not allow solid conclusions to be drawn.
- (7) Presumptions that all individuals in a mass grave were Japanese based on race assessments or materials associated with some of the individuals does not appear to be sufficient scientific

analysis to rule out the possibility that Americans, or portions of Americans are in a grave. Numerous marines buried in Tarawa had ancestry, including Native American, which would be classified as Mongoloid in most general non-metric skeletal analysis. This is even more profound in a case where race analysis was done from images rather than the actual remains.

- (8) The Ground Penetrating Radar data provided by History Flight turned out to be quite accurate in predicting grave locations in spite of the generally limited experience of the operation and equipment failures. Two lost local coffin burials were found at KR-00019 and two mass graves were identified at KR-00019 and KR-00022. Given the effectiveness of the method in finding burials even though it cannot discriminate race, and the likelihood that large numbers of U.S. burials exist, this method along with refined historical analysis has been shown to be an efficient means for locating burials on Betio Island. The following conclusion about GPR not being useful is not substantiated. In fact, these results show the converse, that GPR was effective in discriminating anomalies and that better post-processing including correlation with historical imagery and maps, georeferencing and depth, interval, and form analysis would be an extremely powerful tool for locating possible grave signatures greatly enhancing the effectiveness of followup subsurface-truthing of geophysical survey results.

*Unfortunately, the conclusions and inferences derived from the GPR survey (Harrison 2009) sponsored by History Flight exceed the capabilities of ground penetrating radar in the highly disturbed subsurface landscape of Betio Island. Given the ground disturbances created during the Battle of Tarawa, the disturbances resulting from post-war infrastructure construction, and the cultural practices of local inhabitants of creating trash pits in and around dwellings, the subsurface landscape of Betio contains multiple ground disturbances that can be, and were detected by the ground penetrating radar survey. These anomalies were subsequently interpreted, without subsurface confirmation, as burials of U.S. service personnel (Appendix G, Fox 15 March 2011, p.65-6).*

### **VIII. Note on KR-00017, Coast Watchers Memorial**

This case involves a secondary burial in which remains uncovered by Mr. Louis Eikenhout had been reburied in a rice bag at the Coast Watchers memorial in a cemetery. The area designated for excavation based on the research and interviews made by History Flight. According to the History Flight report, Mr. Eikenhout buried the remains in a rice bag within the coast watchers memorial perimeter fence, with the area most likely being on the west side of the memorial. The RL/A excavated the southwest portion of the monument and then, based on a phone conversation with the witness, excavated outside the monument. Mark Noah of History flight, whose report had formed the foundation for the EDB presentation of the case, heard that the RL was digging outside the perimeter of the Coast Watchers memorial. Mr. Noah notified Dr. Silverstein and Dr. Silverstein sent a location clarification to the RL/A, eliciting a harsh response from the CIL (see Appendix H). At this time Dr. Silverstein presumed that the RL/A must have excavated the areas indicated and that Mr. Noah was misinformed. Likewise, Mr. Noah sent an email to the RL/A with a photograph that had a red circle indicating the place where the witness had indicated he had location he had buried the remains, the unexcavated Northeast corner (Appendix H).

The RL/A noted the following in his draft Report:



*Prior to extending the excavations to the west outside of the enclosure, the RL contacted Mr. Louis Eikhout, then in Australia. The RL interviewed Mr. Eikhout and explained the excavations completed to date, the plans to extend the excavations to the west and requested a reassessment of the depth of the original re-interment. Mr. Eikhout informed the RL that the interment was within two m of the original monument base and that it was not 4.5 feet deep but about one-half a shovel handle deep (approximately one meter deep). Mr. Eikhout also informed the RL that there were “about 100 kids watching me bury the rice sack and I doubt if it was there an hour later.” The informant concurred with the RL’s suggestion that extending the excavation two m to the west would certainly encompass the area where he buried the remains. (Appendix G, Fox 15 March 2011, p.9).*

This suggests an interview technique which leads a witness to a prejudiced conclusion and is not consistent with best interview techniques or practices. This confounder is exacerbated when done over the telephone and done without photos or maps to assist the witness with orientation. The excavation did not include the area previously identified by the witness per the original statement of the interviewers or in the follow-up photograph sent to the RL/A by Mr. Noah (see Appendix I, SAR CIL 2010-158, Figure 6 and Appendices H and I). As a result of an incomplete excavation we cannot know whether or not the secondary burial is located in the area. The RL recommended that the site be closed. This recommendation is not supported by the work completed as compared to the available data about the possible location of the remains.