



**US Army Corps  
of Engineers**  
Construction Engineering  
Research Laboratories

USACERL Technical Report 98/59  
March 1998

# **Army National Guard Environmental Compliance Assessment System (ECAS): Analysis of Processes and Root Cause Application**

by  
Donna J. Schell

The Army National Guard (ARNG) has conducted environmental compliance assessments since 1992 in conformance to the general provisions of Army Regulation (AR) 200-1 but without any standardized auditing procedures or protocols to relate the performance of the internal assessments to the established external assessments. To address this deficiency, ARNG developed a number of tools and practices that are different from those used by other Federal agencies. To evaluate the effectiveness of these processes, the U.S. Army Construction Engineering Research Laboratories performed quality assurance/quality control evaluations on external assessments managed by two different contractors and an internal environmental compliance assessment. This report summarizes the practices that should be considered for unilateral implementation, discrepancies in processes/guidance, and gaps/problem areas in the assessment process.

19980414 086

FOR QUANTITY INFORMATION 3

The contents of this report are not to be used for advertising, publication, or promotional purposes. Citation of trade names does not constitute an official endorsement or approval of the use of such commercial products. The findings of this report are not to be construed as an official Department of the Army position, unless so designated by other authorized documents.

***DESTROY THIS REPORT WHEN IT IS NO LONGER NEEDED***

***DO NOT RETURN IT TO THE ORIGINATOR***

## USER EVALUATION OF REPORT

REFERENCE: USACERL Technical Report 98/59, *Army National Guard Environmental Compliance Assessment System (ECAS): Analysis of Processes and Root Cause Application*

Please take a few minutes to answer the questions below, tear out this sheet, and return it to USACERL. As user of this report, your customer comments will provide USACERL with information essential for improving future reports.

1. Does this report satisfy a need? (Comment on purpose, related project, or other area of interest for which report will be used.)

---

---

---

2. How, specifically, is the report being used? (Information source, design data or procedure, management procedure, source of ideas, etc.)

---

---

3. Has the information in this report led to any quantitative savings as far as manhours/contract dollars saved, operating costs avoided, efficiencies achieved, etc.? If so, please elaborate.

---

---

4. What is your evaluation of this report in the following areas?

a. Presentation: \_\_\_\_\_

b. Completeness: \_\_\_\_\_

c. Easy to Understand: \_\_\_\_\_

d. Easy to Implement: \_\_\_\_\_

e. Adequate Reference Material: \_\_\_\_\_

f. Relates to Area of Interest: \_\_\_\_\_

g. Did the report meet your expectations? \_\_\_\_\_

h. Does the report raise unanswered questions? \_\_\_\_\_

i. General Comments. (Indicate what you think should be changed to make this report and future reports of this type more responsive to your needs, more usable, improve readability, etc.)

---

---

---

---

---

---

5. If you would like to be contacted by the personnel who prepared this report to raise specific questions or discuss the topic, please fill in the following information.

Name: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Organization Address: \_\_\_\_\_

---

---

6. Please mail the completed form to:

Department of the Army  
CONSTRUCTION ENGINEERING RESEARCH LABORATORIES  
ATTN: CECER-TR-I  
P.O. Box 9005  
Champaign, IL 61826-9005

# REPORT DOCUMENTATION PAGE

Form Approved  
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave Blank)

2. REPORT DATE  
March 1998

3. REPORT TYPE AND DATES COVERED  
Final

4. TITLE AND SUBTITLE

Army National Guard Environmental Compliance Assessment System (ECAS):  
Analysis of Processes and Root Cause Application

5. FUNDING NUMBERS

MIPR  
ILE-E-24-97

6. AUTHOR(S)

Donna J. Schell

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

U.S. Army Construction Engineering Research Laboratories (USACERL)  
P.O. Box 9005  
Champaign, IL 61826-9005

8. PERFORMING ORGANIZATION  
REPORT NUMBER

TR 98/59

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)

Army National Guard Bureau  
ATTN: ARNGRC/NGB-ARE  
111 S. George Mason Drive  
Arlington, VA 22204-1382

10. SPONSORING / MONITORING  
AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES

Copies are available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.

12a. DISTRIBUTION / AVAILABILITY STATEMENT

Approved for public release; distribution is unlimited.

12b. DISTRIBUTION CODE

13. ABSTRACT (Maximum 200 words)

The Army National Guard (ARNG) has conducted environmental compliance assessments since 1992 in conformance to the general provisions of Army Regulation (AR) 200-1 but without any standardized auditing procedures or protocols to relate the performance of the internal assessments to the established external assessments. To address this deficiency, ARNG developed a number of tools and practices that are different from those used by other Federal agencies. To evaluate the effectiveness of these processes, the U.S. Army Construction Engineering Research Laboratories performed quality assurance/quality control evaluations on external assessments managed by two different contractors and an internal environmental compliance assessment. This report summarizes the practices that should be considered for unilateral implementation, discrepancies in processes/guidance, and gaps/problem areas in the assessment process.

14. SUBJECT TERMS

Environmental Compliance Assessment System (ECAS)  
Environmental Compliance Checklists  
Environmental Management

Army National Guard

15. NUMBER OF PAGES  
60

16. PRICE CODE

17. SECURITY CLASSIFICATION  
OF REPORT

Unclassified

18. SECURITY CLASSIFICATION  
OF THIS PAGE

Unclassified

19. SECURITY CLASSIFICATION  
OF ABSTRACT

Unclassified

20. LIMITATION OF  
ABSTRACT  
SAR

## Foreword

This study was conducted for the Army National Guard (ARNG) Bureau (NGB) under Military Interdepartmental Purchase Request (MIPR) No. ILE-E-24-97. The ARNGRC/NGB-ARE technical monitor was Ed Dlugosz.

The research was performed by the Planning and Management Laboratory (PL), Environmental Processes Division (PL-N) of the U.S. Army Construction Engineering Research Laboratories (USACERL). The Principal Investigator was Donna J. Schell (PL-N). Jerry Benson is Division Chief (PL-N) and L. Mike Golish is Operations Chief (PL). The USACERL technical editor was Linda L. Wheatley, Technical Information Team.

COL James A. Walter is Commander of USACERL, and Dr. Michael J. O'Connor is Director.

# Contents

<b>SF 298.....</b>	<b>1</b>
<b>Foreword.....</b>	<b>2</b>
<b>1 Introduction.....</b>	<b>5</b>
Background .....	5
Objectives .....	5
Approach.....	5
<b>2 NGB Environmental Compliance Assessment System (ECAS).....</b>	<b>7</b>
Definitions .....	7
External Assessments .....	8
Internal Assessments.....	9
<b>3 Positive ECAS Practices.....</b>	<b>10</b>
External Assessment Practices.....	10
Internal Assessment Practice .....	11
<b>4 Summary of Findings and Recommendations.....</b>	<b>13</b>
General Findings for External and Internal Assessments .....	13
Findings Specific to External Assessments.....	16
Findings Specific to Internal Assessments.....	18
<b>5 Conclusion .....</b>	<b>20</b>
<b>Appendix A: Standardized Checklist Items .....</b>	<b>21</b>
<b>Appendix B: Draft Ranking Scheme for Significant, Major, and Minor .....</b>	<b>24</b>
<b>Appendix C: Sample Software Issues Identification and Tracking Sheet .....</b>	<b>27</b>
<b>Appendix D: Software Issues Identification and Tracking Sheet.....</b>	<b>31</b>
<b>Appendix E: Revised List of Documents Requiring Review.....</b>	<b>38</b>
<b>Appendix F: Paperwork Review.....</b>	<b>40</b>

**Appendix G: SCS Form .....42**

**Appendix H: Installation Previsit Questionnaire (PVQ) .....43**

**Appendix I: Facility PVQ .....53**

**Distribution**



# 1 Introduction

## Background

The Army National Guard (ARNG) has been conducting environmental compliance assessments since the early 1990s. Since the beginning of the process, the National Guard Bureau (NGB) has developed a number of tools and practices that are different from those used by other Federal agencies performing environmental compliance assessments. To cross check the effectiveness of these processes, the NGB decided to have a third party (the U.S. Army Construction Engineering Research Laboratories [USACERL]) perform quality assurance/quality control (QA/QC) evaluations on external assessments managed by two different contractors and an internal environmental compliance assessment.

## Objectives

The objectives of this effort were to review the entire environmental compliance assessment process as implemented by the NGB to identify:

- practices that should be considered for unilateral implementation
- discrepancies in processes/guidance
- gaps/problem areas in the process.

## Approach

This analysis and review was conducted through the following mechanisms:

- QA/QC of the Alaska external ECAS, June 1997
- QA/QC of the New York external ECAS, October 1997
- Attendance at first joint process review meeting, August 1997
- QA/QC of the New Jersey internal ECAS, November 1997
- Attendance at second joint process review meeting, December 1997.

Evaluations were performed by document review, personnel interviews, and process observation. Documents reviewed included contracts for the assessing contractors, preparatory information provided to the state, written aids provided to the assessors, assessors' findings of noncompliance, and the manual for the WINCASS software, which is used to write and track findings of noncompliance. Interviews were held with individuals managing, receiving, and performing the assessments. Processes observed included: in-brief of state personnel; onsite assessments; QA/QC team preparation for field team briefing; environmental compliance assessments of sites by field teams; review of findings by the assessment QA/QC team; briefing and review of findings by installation personnel; and problem troubleshooting by assessment team leaders.

## 2 NGB Environmental Compliance Assessment System (ECAS)

### Definitions

*External Assessment*—an environmental compliance assessment performed primarily by individuals who are not from the installation.

*Field Team*—assessors assigned to review compliance at NGB sites outside of headquarters. Typically a field team has two assessors.

*Internal Assessment*—an environmental compliance assessment performed with personnel from the installation participating on the field assessment teams.

*Installation*—for the purpose of ECAS, an installation is all sites, whether Federally funded or state funded, within one state.

*Program Management Team*—a group of two or three people who coordinate the assessment with the installation, train assessors on state/installation-specific issues, write the installation-wide findings, and provide oversight of all the field teams. This team typically has the same members as the QA/QC team.

*QA/QC Team*—a group of two or three people who read every finding for style, grammar, accuracy, and consistency. This team typically has the same members as the Program Management Team.

*Summary Condition Statement (SCS)*—a one sentence statement of an issue of noncompliance. These SCSs are tied to individual checklist items in the compliance assessment manuals used by the ARNG and hard wired into WINCASS.

*WINCASS*—a relational database that is used to write findings and track the closure of noncompliance findings in the ARNG.

## External Assessments

External assessments lasted for 2 weeks during the tenure of this process review. Sites to be assessed are selected by the state ARNG ECAS coordinator. The ARNG ECAS coordinator, in conjunction with the assessment Team Leader, develops the assessment schedule. The program management team arrives at the installation prior to the field assessment teams. During this pre-assessment period, the project management team interviews ARNG program managers, identifies issues unique to a particular state, and determines which issues are going to be installation-wide findings and which are findings at individual sites. The program management team conducts the in-briefing to installation personnel.

After arriving, the field teams are briefed by the program management team on the issues of concern and given directions for the assessments ahead. Once site assessments have begun, field teams are expected to write all the findings for a site on the day the site was visited. All findings are written using WINCASS. When writing the findings, there are some basic expectations: there are no one sentence findings; positive findings must demonstrate the site has gone above and beyond compliance; the style and grammar rules outlined in the WINCASS manual are used; the assessor must provide supporting information for the root causes they select.

Unlike other Federal agencies, ARNG findings of regulatory noncompliance are all required to have an SCS, a short-term suggested solution, a root-cause suggested solution, and, when applicable, a pollution-prevention suggested solution.

Once findings begin coming in from the field assessment teams, the program management team moves into QA/QC mode. Each finding is checked for style, grammar, accuracy, and consistency. In cases where trends are noticed or a need develops to provide additional instructions for field teams, an "all teams" e-mail is sent every evening.

During this period, daily briefs are also held for all installation personnel who want to review the findings. At these briefings, installation personnel have the opportunity to respond to findings and provide input on the root cause.

After returning from the field assessments, the field team members are required to address all comments from the QA/QC team on their findings. If a field assessor disagrees with the QA/QC team comment, they must resolve the issue with the

pertinent reviewer. All corrections must be made in WINCASS before the final departure of the assessment team.

The program management team is responsible for giving a final out-brief summarizing the findings to installation personnel.

## Internal Assessments

While the process of actually assessing a site and writing findings is the same in an internal assessment as it is in an external assessment, the process does have some differences. Prior to the start of the assessment, the state ARNG ECAS coordinator selects approximately 40 percent of the sites in the state to be assessed. Criteria for selection were known problem sites and facilities that had a large number of findings in the previous external ECAS. The assessment schedule is set with the aid of an experienced contractor. To promote accurate and consistent internal assessments, the assessment field teams consist of one Guard member and one contractor. The QA/QC team consists of one contractor and the state ECAS coordinator. Unlike for external assessments, the program management team performs a site visit.

Unlike the external assessments observed, this was performed over a 5-day period. Day 1, Monday, was a travel day for the assessment team members to gather onsite at ARNG Headquarters (HQ) in Trenton, NJ, for a preliminary meeting to discuss logistics. Day 2, Tuesday, started with an all teams meeting to address issues and concerns the field team members needed to be aware of during the assessment process. At this meeting, presentations were made by installation personnel responsible for individual programs. As soon as the meeting was over, field teams left for their assigned sites. All field teams were due back at HQ by close of business (COB), Day 4, Thursday, with all findings written and QA/QC corrections completed by COB, Day 5, Friday.

Unlike external assessments, no in-brief or out-brief was held. Also, no formal daily review of findings is held, but the state ECAS coordinator is expected to review the findings in conjunction with the QA/QC team. Their particular task is to identify incorrect root causes selected by the field teams and findings written for which the compliance factor is at HQ and not at the site assessed.

### 3 Positive ECAS Practices

These practices are highlighted because they typically have not been observed at environmental compliance assessments being performed by other agencies. Observation of these practices in either an internal or external setting does not preclude them from being used in either format when applicable.

#### External Assessment Practices

- The use of two to three designated QA/QC personnel—The Program Manager inevitably is drawn away and ends up being limited in how much QA/QC he/she can do.
- Field teams are required to complete data collection forms provided in their field books for each site—This form prompts the assessor and his/her backup to ensure all necessary areas are being addressed.
- The checkout process ensures the teams deal with all of the QA comments—When the checkout process is stringently enforced, the report requires less clean up after assessment when the assessors are scattered and the circumstances related to a specific site have become blurred in assessors' memories. On one assessment, the checkout process was modified so that the field teams did not wait until they completed all corrections for initial review by the QA/QC team. The Program Management Team guidance was to correct 20 or so findings and then have the QA/QC team go over the completed items to identify any problems or answer questions. This change was made in order to provide quicker response to assessor questions on reviewer comments.
- Field teams with two laptop computers facilitated completion of findings daily—This practice minimized the time personnel worked in the evenings, thereby improving the morale and health of the personnel.
- Automobile adapters were provided so computers could be used in the car by one field team member while another member is driving.

- The state was prepared for the assessors by having ready copies of permits, tank registrations, copies of plans etc. This self-initiated effort was based mostly on the previous participation by the ECAS coordinator and the Environmental Office chief in the ECAS for another state.
- In-brief for the field teams addressed not only the installation issues but also included a "day in the life" reminder of what is to be looked at, how the assessor can brief him or herself, and expectations for the assessment process.
- Instead of creating the portion of the field team in-brief identifying state requirements in the office, it was created onsite after interviewing Guard personnel and identifying what were the real issues pertinent to the Guard of that state. This practice reduced the time spent in the in-brief reviewing regulatory materials not pertinent to the majority of field teams.
- Software Development Center (SDC) person was onsite for first few days to help with computers.
- Assessors filled out a post-assessment questionnaire about their experiences, good and bad, during the assessment. It included a section for comments on the software. The project management team then reviewed these questionnaires for improvement suggestions.
- In the rare situation that no findings are noted at a facility, the field team is required to write a finding that documents what they did see and why there were no findings.
- Use of digital cameras documented what was seen by the assessors. This is used to support the findings of noncompliance and remind the assessor of the details observed.

### **Internal Assessment Practice**

- By pairing an ARNG person and a contractor, ARNG personnel were trained in the assessment process and regulatory compliance while providing the contractor with instant access to institutional knowledge.
- When actively involved in the QA/QC process, the state ECAS coordinator can provide ongoing responses and clarification to issues raised by assessors during

the actual assessment. This availability reduced the amount of time required to create the reports.

- By limiting the process to 5 days, Guard personnel were more likely to exert a consistent effort than if the process was extended over 2 weeks.



## 4 Summary of Findings and Recommendations

### General Findings for External and Internal Assessments

- While some standard checklist items are identified for use before the start of the assessment, it seems some recurring issues get addressed during the assessment process through team messages. This practice results in corrections being made both midstream and at the end of the assessment to achieve consistency.

*Suggested solution:* Develop a list of standardized checklist items (see Appendix A). This list must be reviewed by the Team Leader before each assessment to identify when state checklist items supersede Federal/agency requirements.

- No written definition exists for application of Significant, Major, Minor rankings to findings of noncompliance.

*Suggested solution:* Develop a chart for assessors to fill out so that the software will automatically generate the ranking for each finding of noncompliance. Appendix B is a sample scheme incorporating all the factors suggested in roundtable discussion between NGB and contractors.

- The state supplements developed by the contractors do not mirror the TEAM Guide subject headings.

*Implemented solution:* In Fiscal Year 1998 (FY98), USACERL will create the state supplements, beginning with the contractors inserting the local requirements. Training of contractor personnel to insert checklist items in the state supplements occurred in December 1997.

- No mechanism is in place for the forwarding of assessment team comments on the content of tools developed by USACERL.

*Implemented solution:* A comment form (Appendix C) is being added to each MS-Word™ compliance assessment manual developed by USACERL.

- No adapters are provided for recharging batteries.

*Suggested solution:* Adapters should be provided with the cameras when they are distributed to the field teams.

- Positive and Risk Management Findings are written randomly against checklist items. This practice requires the assessor to develop a new summary condition statement (SCS) for each assessment, which leads to problems in the coding of the finding.

*Implemented solution:* Two new checklist items have been added in each section of the ARNG Supplement to TEAM Guide. XX.2.2.G will be used to write up all risk management findings, and XX.2.3.G. will be used to write up all positive findings for a particular section.

- The Program Management portion of the Other Environmental Issues section of the ARNG Supplement to TEAM Guide is not truly assessed or used.

*Suggested solution:* This section of the manual has undergone additional tailoring for use at NGB sites. Contractors will be expected to train their personnel in the application of this section. The writing of findings in this section should be the responsibility of the QA/QC team. Particular attention should be paid to correlating the root causes identified by field teams to program management requirements.

- Reports of noncompliance with installation standing operating procedures (SOPs) are inconsistently written.

*Implemented solution:* A specific checklist item has been added in the program management section to address installations SOPs.

- In the process of reviewing findings, the perception was that a distinct difference existed in root causes chosen for noncompliance issues during the internal assessments than was observed during the external assessments. This tendency could be attributed to the presence of Guard personnel on the teams, particularly when they are from the state environmental office. No method exists to measure whether the root causes found in an internal assessment are more or less accurate than those typically identified in an external assessment.

*Implemented solution:* Assessors are required to write a justification of root cause selection. The QA/QC Team reviews the justification and determines if it is sufficient. The installation representative has the final judgment though on the accuracy of the selected root cause.

- Software. Without fail, the issue on which the field team personnel were most vocal was the WINCASS software. Appendix D lists detailed comments. The following are oversight or management comments:

- The assessment team is unsure what reports are usable and what changes have been made to the software. Having to look on the help screens to find the version number is inconvenient. During one assessment, the Program Manager's computer said 1.07 and field team members' computer said Version 1.10, database 1.072, sybase 5.5.01.

*Suggested solution:* When packing the laptops for an assessment, the last item to go in the boxes could be a sheet indicating what version of the software is loaded (including manual versions) and what changes have been made to the software since the previous assessments. The first screen displayed in WINCASS should indicate the version number.

- Lack of response to comments on WINCASS. While Appendix C in the WINCASS User Manual provides a form for reporting a single issue, it is cumbersome for reporting multiple issues. Additionally, it does not document what was done to address the issue and how the user can implement the change. See Appendices C and D of this report for a sample form and for comments.

*Implemented solution:* More direct lines of communication have been opened between the people using the software and the SDC. At the process review meeting in December, SDC representatives responded to all submitted comments and demonstrated changes to be fielded in WINCASS in FY98.

- The Contractor Scope of Work (SOW) does not indicate the need to secure a license for SQL, which is needed to run WINCASS. Nor does the SOW indicate that this license will be provided by the government.

*Implemented solution:* The contract language was changed to clarify this issue.

- Some findings are coded as Issues which are not issues. For example HM.030.02.TEAM.000.01 is driven by 40 CFR and an EO, but the software codes this as an Issue. This coding is incorrect and cannot be corrected by the contractor entering the Draft Dataset.

*Implemented solution:* WINCASS has been cleaned to correct these issues.

- A clean alternatives list needs to be added (there are already lists for root cause alternatives, corrective action alternatives, and P2 alternatives). The P2 alternatives and corrective action alternatives are hard wired to the checklist items. No process is currently in place to deal with a timely addition of alternatives for new checklist items when manuals are updated. Incorporation of new alternatives and SCSs is perceived to be slow and inconsistent.

*Implemented solution:*

- Science Application International Corporation (SAIC) is creating a new master pollution prevention alternatives list.
- Engineering - Environmental Management (e<sup>2</sup>M) is creating a new master corrective actions alternatives list.
- USACERL is creating a new master root cause alternatives list.
- All alternatives lists will be included in the March 1998 release of WINCASS.
- Suggested new alternatives will be reviewed every 6 months for potential inclusion into WINCASS.

## Findings Specific to External Assessments

- Facilities and facility points of contact (POCs) were unaware that the ECAS team was onsite and the assessment in progress (June 1997).

*Suggested solution:* Require the installation to send a 1-week notice to all facilities being assessed. This notification and receipt of notification should be documented. The field teams need to document the already required day-before phone calls on the Facility Visit Checklist.

- During the assessment, team members were caught off guard by the complexity of some facilities (i.e., the Armory in Anchorage, which took more time than expected because of its size and the number of units with storage facilities there).

*Suggested solution:* A copy of the Facility Installation Stationary Plan (FISP) or Desk-top Real Property Database (DRREAL) is needed when planning the assessment in order to identify unusual sites that can take more time than usual (i.e., square footage, how many units). The installation should consistently include the square footage in the facilities information as a part of the scoping assessment. These "abnormal" facilities need to be documented so that, in the next assessment round, the same scheduling crunch does not reoccur.

- Because of the nature of ARNG, team members may be forced to write findings without being able to interview personnel responsible for, or at least representing, a site where there are findings. This lack of contact makes the selection of an accurate and true root cause difficult.

*Implemented solution:* Assessors will document the lack of onsite personnel in the comments field of the finding on WINCASS.

- No standard requirement for an after action report.

*Implemented solution:* NGB has now developed an SOP for after action reports, but feels this SOP is of limited value because of the command structure in the NGB. This issue should be reexamined once the ECAS process has been developed further.

- With the extended checkout period, more people are grouped together trying to complete a variety of tasks, resulting in a high noise potential.

*Suggested solution:* Ask the state for a separate room to be available for people who need to avoid the noise.

- Lack of guidance on dealing with the new Army Regulation (AR) 200-1 and Department of Defense (DOD) Instructions (DODIs). The concern during the review was the writing of findings that are no longer relevant because of changes in Army and DOD regulations. A second concern was how to inform installations of findings that have become obsolete because of these regulatory changes.

*Suggested solution:* Broadcast a message to all the installations highlighting which checklist item numbers have ceased to exist and the need to look at the new regulations when pursuing closure of past findings. Field teams will begin assessing, using the latest ARs and DODIs, in March 1998.

- The installation indicated the list of documents needed for review in the WINCASS manuals is too long and repetitive. While a different list provided a week before the assessment by the contractor was somewhat more limited, neither list indicated which items needed to go in the program management folder and which needed to go in the field team folders.

*Suggested solution:* Appendix E is a revised list. Installations need to receive this list 1 month in advance of the assessment.

### Findings Specific to Internal Assessments

- The Guard personnel on the field teams often functioned as observers rather than active participants. When an expert is available, it is human nature to let the expert do the job. This tendency was observed in both the field data gathering portion of the assessment and the actual writing of findings (see Appendix F).
- *Suggested solutions:*
  - The ECAS training workshop needs to reinstate the “how to perform an assessment” module. Additionally, Guard personnel should be required to take the ECAS training (how to, WINCASS, etc) before they become a team member. It is especially important for the Guard personnel to have worked with the WINCASS database in the 6 months prior to the assessment in order to facilitate the process.
  - Create a task list for the Guard personnel to perform during the assessment. While the contract assessor is interviewing personnel, Guard personnel could be looking through paperwork. Appendix E is a suggested list of items to look for and what the rookie assessor should see when he/she finds it. The Guard personnel should then be responsible for writing all the findings related to their tasking list. In this manner, the assessment becomes a partnering experience rather than an observation experience.
- Findings are being cited against incorrect regulations. Unlike the 2-week process where time is available to identify incorrect trends and send all-teams messages to clarify which checklist items are to be used for what issues, time is insufficient for this during what is essentially 3 days of writing findings.

*Suggested solutions:*

- Guard personnel should be required to take the ECAS training (how to, WINCASS, etc) before they become a team member. Refresher training should have been taken in the previous 6 months.
  - Use the "standardized checklist items guidance."
  - Reformat the SCS list so that checklist items on similar issues in TEAM, ARNG, and state checklists print out next to each other. This format should naturally evolve as a part of the revision of the SCS list (see Appendix G).
  - Reformat the SCS list so topic headings associated with sets of checklist item numbers appear on the print out. This format will save an enormous amount of time in searching through the process.
- Because the QA/QC team does not have advance time to identify installation findings and the status of programs, a great deal of unsifted and disorganized information is thrown at the team members on Tuesday morning. They have to quickly assimilate this information and apply it on Tuesday afternoon.

*Suggested solution:*

- Have the QA/QC team arrive on Sunday, or at least in time to have Monday afternoon to spend with installation personnel.
- Create two different previsit questionnaires (PVQs), one for the facilities and one for the installation. The installation PVQ will focus on programmatic issues and aid the installation gathering paperwork for the teams before they are sent into the field. The facility PVQ will be more quantitative (Appendices H and I).

## 5 Conclusion

The ARNG environmental compliance assessment program is effective in identifying noncompliance. The majority of findings are related to difficulties in consistently communicating the same information to three different contractors and not documenting process changes as the ARNG process continually evolves. ARNGC/NGB is the responsible agent for selecting solutions to the identified difficulties and ensuring consistent implementation of positive practices where applicable. ARNGC/NGB contractors have been provided with the products and assessment aids developed during the evaluation process. The establishment of In-Progress-Review (IPR) meetings with the ARNGC/NGB, SDC, USACERL, and contractor representatives has facilitated communication and promoted the development of solutions and the consistent application of the compliance assessment process.

It is anticipated by NGB that the results of this independent review of specific aspects of the ARNG ECAS Program will assist NGB in integrating the internal and external assessment cycles into one consistent continuum of data collection and reporting through standardizing the processes. Subsequent training of the standardized processes to A/Es and Installation staff will ensure successful implementation of the Program as well as its universal appeal to the intended primary market of DOD agencies.



## Appendix A: Standardized Checklist Items

Use the following checklist item numbers for the indicated conditions. Before the start of the assessment, state checklist item numbers superseding this guidance should be indicated.

Issue (this is not a Summary Condition Statement, but a topic)	TEAM/ARNG Supp Checklist Item Number
<b>GENERAL</b>	
Risk reduction findings.	Use ??.002.2.G in the pertinent section
Positive findings.	Use ??.002.3.G in the pertinent section
<b>Cultural Resources</b>	
Building(s) need to be investigated for inclusion on the National Register	C.005.01.TEAM.0000
<b>Hazardous Material</b>	
Containers of hazardous chemicals are not labeled.	HM.001.03.TEAM.0000
Hazardous materials storage/handling areas do not prevent releases to the environment ( <i>use when there is no applicable TEAM or state checklist item</i> ).	HM.004.05.ARNG.0000
Flammable/Combustible liquids stored outside improperly	HM.035.08.TEAM.0000
Spills in excess of the RQ	HM.020.02.TEAM.0000
Continuous releases	HM.020.03.TEAM.0000
<b>Hazardous Waste</b>	
No hazardous waste management program/plan	HW.001.03.ARNG.0000
Uncharacterized hazardous waste	HW.010.01.TEAM.0000
Hazardous waste accumulation and/or storage does not prevent releases to the environment ( <i>use only when there is no applicable TEAM or state checklist item</i> ).	HW.010.01.ARNG.0000
CESQG personnel do not have adequate training	HW.010.02.ARNG.0000
CESQG exceeding quantity limitations	HW.015.01.TEAM.0000
Incorrectly labeled container at CESQG	HW.015.01.TEAM.0000
Incorrect disposal of hazardous waste from a CESQG	HW.015.01.TEAM.0000
SQGs exceeding time/quantity limitations	HW.020.01.TEAM.0000
Incorrectly labeled container at SQG	HW.020.01.TEAM.0000
Incorrect disposal of hazardous waste from a SQG	HW.020.01.TEAM.0000
SQG does not have emergency response planning	HW.020.05.TEAM.0000
SQG does not have an emergency coordinator	HW.020.05.TEAM.0000
SQG personnel do not have adequate HW training	HW.025.01.TEAM.0000

<b>Issue</b> (this is not a Summary Condition Statement, but a topic)	<b>TEAM/ARNG Supp Checklist Item Number</b>
SQG satellite accumulation points incorrectly managed	HW.035.01.TEAM.0000
SQG accumulation point does not have containment/alarm/communication/spill control equipment/fire equipment	HW.040.02.TEAM.0000
No weekly inspection at SQG storage area	HW.040.03.TEAM.0000
LQGs exceeding time/quantity limitations	HW.055.01.TEAM.0000
Incorrectly labeled container at LQG	HW.055.01.TEAM.0000
Incorrect disposal of hazardous waste from a LQG	HW.055.01.TEAM.0000
LQG biennial report	HW.055.04.TEAM.0000
LQG use of manifests	HW.055.05.TEAM.0000
LQG does not have emergency response planning	HW.065.01.TEAM.0000
LQG does not have an emergency coordinator	HW.065.02.TEAM.0000
LQG personnel do not have adequate HW training	HW.060.01.TEAM.0000
LQG satellite accumulation points incorrectly managed	HW.075.01.TEAM.0000
LQG storage area does not have containment/alarm/communication/spill control equipment/fire equipment	HW.080.04.TEAM.0000
No weekly inspection at LQG storage area	HW.080.03.TEAM.0000
Facility personnel transporting hazardous waste without a USEPA id.	HW.100.01.TEAM.0000
<b>Natural Resources</b>	
Lack of erosion control measures	NR.010.09.ARNG.0000
No or insufficient INRMP	NR.001.003.ARNG.000
<b>Other Environmental Issues</b>	
NEPA documentation inadequate for training areas	O1.005.01.TEAM.0000
No noise complaint procedure implemented	O2.001.10.ARNG.0000
The facility has not been screened for contamination from past practices	O3.001.03.ARNG.0000
Facility stores hazardous materials in excess of operational requirements	O4.001.19.ARNG.0000
Hazardous material container is in poor condition	O4.001.19.ARNG.0000
Hazardous materials are being stored for which there is no need	O4.001.19.ARNG.0000
A PA is not conducted prior to property transfers	O5.001.11.ARNG.0000
Facility is not complying with Installation SOPs	O5.001.03.ARNG.0000
<b>POL</b>	
The facility lacks a SPCC	PO.005.01.TEAM.0000
Facilities required to have an SPCC under AR 200-1, but not required to have an SPCC under 40 CFR 112, do not have an SPCC and/or the SPCC is inadequate	PO.005.01.ARNG.0000
The 40 CFR 112 required SPCC is inadequate	PO.005.02.TEAM.0000
The installation/facility lacks an ISCP	PO.005.03.ARNG.0000
The ISCP is out of date	PO.005.04.ARNG.0000
POL (non-tank) storage not meeting requirements for secondary containment/diversionary structures	PO.020.01.TEAM.0000

Issue (this is not a Summary Condition Statement, but a topic)	TEAM/ARNG Supp Checklist Item Number
Used oil container not labeled correctly	PO.065.06.TEAM.0000
Discharges of POL	PO.015.01.TEAM.0000
<b>Solid Waste</b>	
Solid waste debris scattered at the site	SO.010.01.TEAM.0000
Solid waste volume not minimized through recycling	SO.025.01.ARNG.0000
The facility is not protected against open dumping	SO.035.20.TEAM.0000
<b>Storage Tanks</b>	
POL AST has inadequate secondary containment	ST.005.01.TEAM.0000
Substandard UST (not meeting Dec 1998 req, not performing monthly/annual testing)	ST.025.01.TEAM.0000
Heating oil USTs not managed according to RCRA I requirements	ST.030.01.ARNG.0000
POL UST release detection system is inadequate	ST.065.01.TEAM.0000
Abandoned/out-of-service UST improperly closed	ST.095.01.TEAM.0000
Facility has no closure records for UST	ST..090.02.TEAM.0000
<b>Toxic Substances</b>	
No asbestos survey	T2.001.03.ARNG.0000
No asbestos operations and maintenance plan	T2.001.04.ARNG.0000
Radon measurements not done on priority 1 structures	T3.001.03.ARNG.0000
<b>Wastewater</b>	
Discharge to surface waters without NPDES permit	WA.010.01.TEAM.0000
Stormwater discharge relating to industrial activity without NPDES	WA.010.03.TEAM.0000
Discharge of inappropriate pollutants to a POTW	WA.025.02.TEAM.0000
Improperly closed wells	state/local issue

## Appendix B: Draft Ranking Scheme for Significant, Major, and Minor

Decision Criteria	Significant	Major	Minor
Cost of Corrective Action	\$5,000 or more  Excavation of contaminated soil from a leaking tank and fixing/replacing the tank. 3	\$1,000 - \$4,999  Installation of secondary containment. Characterization of hazardous waste. 2	Less than \$1,000  Replacing damaged drum. Purchase of solid waste receptacle. 1
Facility type (has to do with impairment to readiness)	Activity crucial to readiness is halted because of an environmental problem.  Id of an endangered species in training area stopping training. 3	Impact on long-term readiness of activity. Typically at a GOGO.  1	Readiness has not been impaired. Typically at a SOSO.  0
Threat to the environment or human health	Immediate threat.  Leaking container or tank. Personnel exposed to friable asbestos. 10	Potential threat.  Lack of secondary containment. Violation of a discharge permit. 5	Little or no threat.  Small POL stain. Limited asbestos broken tile. Drums are labeled but not according to regulations. 1
NOV Probability	NOV has already been received.  3	State has a history of issuing NOVs on this issue.  2	Low likelihood of NOV.  1

Decision Criteria	Significant	Major	Minor
Physical extent of noncompliance	<p>Ongoing or substantial environmental or human impact.</p> <p>Leaking UST</p> <p>Continuing violation of a discharge permit.</p> <p>Visibly friable asbestos in usually occupied work area.</p> <p>5</p>	<p>Medium environmental or human impact.</p> <p>Medium size POL stain.</p> <p>Lack of secondary containment, but no leaks.</p> <p>3</p>	<p>Minimal environmental impact.</p> <p>Small POL stain.</p> <p>Some broken asbestos tiles.</p> <p>1</p>
<p>Administrative or procedural problem</p> <p>If problem is not administrative or procedural in nature, the value of this category is 0.</p>	<p>Lack of paperwork/procedure is the root cause of a substantial harm to human health or the environment.</p> <p>3</p>	<p>Lack of paperwork/procedure is indicative of the lack of a program and the program is not operating well.</p> <p>Incorrect/incomplete implementation of exiting procedure has produced adverse impact to the environment or human health.</p> <p>No HWMP and hazardous waste is poorly managed throughout the installation.</p> <p>No manifests.</p> <p>2</p>	<p>Lack of paperwork/procedure has not impacted the efficiency of the management of the program.</p> <p>Incorrect/incomplete implementation of exiting procedure has not produced adverse impact to the environment or human health.</p> <p>No HWMP but hazardous waste is well managed.</p> <p>Not all of the manifests are present.</p> <p>Spill procedure not posted.</p> <p>1</p>

Minor = a score of 4 through 8

Major = a score of 9 through 19

Significant = a score equal to or greater than 20

## **Appendix C: Sample Software Issues Identification and Tracking Sheet**

**Preceding Page Blank**

## Sample Software Issues Identification and Tracking Sheet

### Form Definitions and Use

- ◇ ID # - this is a unique number assigned to each identified issue. This number is how the issue will be reference in discussion between all the parties. Printing comment start with P, writing comment start with W, and comments on the reports start with R. The rest of the number reflects the month and date the comments are recorded and the comment number for that date. (NOTE: This number is formatted by using the auto numbering function, Format/ Bullets and Numbering/ select the first numbering option and then use modify to set up the prefix.)
- ◇ Software Version - this indicates what version of the software the comment was encountered.
- ◇ Issue: A description of the problem encountered and/or wish of the user.
- ◇ NGB yes/no - Designated NGB personnel indicate where the SDC are to address the comment (yes) or they are not to address the comment (no).
- ◇ Est. Comp. Date - SDC is to fill out this field with the estimated completion date for all comments referred to them for resolution.
- ◇ Resolution Description - SDC's description of how the issue has been resolved. "Done" is not a sufficient description.
- ◇ Version in Which the Resolution is Implemented - SDC indicates which version of the software the final fix is put into.

[illegible]



## **Appendix D: Software Issues Identification and Tracking Sheet**

**Preceding Page Blank**

## Software Issues Identification and Tracking Sheet

### Form Definitions and Use.

- ◇ ID # - this is a unique number assigned to each identified issue. This number is how the issue will be referenced in discussion between all the parties. Printing comments start with P, writing comments start with W, and comments on the reports start with R. The rest of the number reflects the month and date the comments are recorded and the comment number for that date. (NOTE: This number is formatted by using the auto numbering function, Format/ Bullets and Numbering/ select the first numbering option and then use modify to set up the prefix.)
- ◇ Software Version - this indicates what version of the software the comment was encountered.
- ◇ Issue: A description of the problem encountered and/or wish of the user.
- ◇ NGB yes/no - Designated NGB personnel indicate where the SDC are to address the comment (yes) or they are not to address the comment (no).
- ◇ Est. Comp. Date - SDC is to fill out this field with the estimated completion date for all comments referred to them for resolution.
- ◇ Resolution Description - SDC's description of how the issue has been resolved. "Done" is not a sufficient description.
- ◇ Version in Which the Resolution is Implemented - SDC indicates which version of the software the final fix is put into.

ID #	Software Version #	Issue	NGB yes/no	Date USA SDC-W Rec'd	Est. Comp. Date	Resolution Description	Version in which resolution is implemented
<i>Printing Comments</i>							
	used in AK Version 1.10	Cannot print all findings at one time in URC order. (i.e., a single button selection).					
	used in AK Version 1.10	Cannot sort and print by Section in URC order. (i.e., grouping all the haz waste findings from all the team together in the printout.)					
	used in AK Version 1.10	Cannot print Table 1-1 and the Draft Summary of Management Reports for just the previous days findings without marking for deletion all of the other findings.					
		Currently, findings for an individual team can be printed out by selecting a range of finding numbers; this is convenient in the morning for printing the previous days findings.					
	used in AK Version 1.10	Prints all the pages 1s, then all the page 2s, and then all the page 3s - no collation.					
	used in AK Version 1.10	Follow-on pages (e.g., alternatives) are printed for "Issues"; these are not needed and so are a paper waste.					
	used in AK Version 1.10	Occasionally a second page #3 prints out. This seems to happen when the number of alternatives selected or the length of the alternatives selected exceeds the capacity of one page. When the second page #3 is generated, it					

ID #	Software Version #	Issue	NGB yes/no	Date USA SDC-W Rec'd	Est. Comp. Date	Resolution Description	Version in which resolution is implemented
		prints out all of the Root Cause/P2 Alternative information fields again; this should only be done once the ability to enter these alternatives because functional.					
	used in AK Version 1.10	Identify a printout other than by date only. An identifying print number or specific information such as QA Review or the "1st Tech Review" would enable a more organized report. Currently, cannot tell what phase of the process a printed finding sheet represents.					
	used in AK Version 1.10	Proportion the finding sheet so that it fits on a maximum of 2 pages.					
	used in AK Version 1.10	Need to be able to print out the SCS list without "No Summary condition...." and without the ARNG graphic.					
	used in AK Version 1.10	If the facility specific fields goes beyond the first page, it types over the header of the second page when it is printed out.					
<i>Comments on Writing Findings</i>							
	used in AK Version 1.10	Provide a button selection at the first entry screen asking if this is a Finding, a Risk Reduction Issue, or a Positive Issue.  Currently, there is no easy way to create a Risk Reduction Issue. The current process of using the 001.02.ARNG URC is cumbersome					

ID #	Software Version #	Issue	NGB yes/no	Date USA SDC-W Rec'd	Est. Comp. Date	Resolution Description	Version in which resolution is implemented
		at best and does not always work. When the choice of Issue is not available, one must be created and the software does not allow the selection of the Issues window. The team then has to enter a bogus Rank and a bogus Root Cause in order for the Issue to be saved.					
	used in AK Version 1.10	Team members need to be able to just enter information in the first two fields of the Alternative Tab and not have to enter information in the last two fields.					
	used in AK Version 1.10	The Alternatives lists need to be added (there are root cause alts, corrective action alts, and P2 alts.					
	used in AK Version 1.10	Cannot correct typos or misspellings in SCSs, Citations, Root Cause, Alternatives, or Regulatory Requirements. (Enable Superuser to do this, not individual team members.)					
	used in AK Version 1.10	Repetition in the Facility name and type database fields.					
	used in AK	When adding a Facility Name, the entry field is not long enough to accurately enter the Facility name or Type.					
	used in AK	Under the Facility Entry, Installation Number should represent the FISP/DRP <sup>REAL</sup> number and the Facility Number should represent the building number, if applicable. This distinction needs to be made.					
	used in AK	The Local POTW window is too short.					

ID #	Software Version #	Issue	NGB yes/no	Date USA SDC-W Rec'd	Est. Comp. Date	Resolution Description	Version in which resolution is implemented
	used in AK Version 1.10	In some situations (like stormwater discharges) the citation is usually a local reg. Several of these situations may occur in one state in different locations. The same SCS may apply to all of the situations, but the Reg. citation and the Reg Req. will need to change. Need the ability to add local (ZZSP) codes in the field.					
	used in AK	Need an option for dealing with tanks when the installation date is unknown. WINCAS will not allow a value of 00/00/00.					
	used in AK Version 1.10	Cannot toggle down the SCS list.					
	used in AK Version 1.10	Be able to create a save/backup file for the entire state.  It would be great to have a system where all the state-specific data could be zipped and saved to a disk in case the notebook crashes and dies.					
	used in AK Version 1.10	Need a way for two people to make edits to two versions of the same database, merge the files, and have all the latest and greatest changes update the master list. This needs to be done to facilitate the post-assessment production of the report.					
	used in AK	COPY and PASTE functions are needed when entering and editing findings.					

ID #	Software Version #	Issue	NGB yes/no	Date USA SDC-W Rec'd	Est. Comp. Date	Resolution Description	Version in which resolution is implemented
	used in AK Version 1.10	A Spell checker is needed.					
	used in AK Version 1.10	When an SCS exists in the database, but there is no corresponding entry in the Criteria table, it is not possible to select the SCS and complete the finding. There is no edit capability.					
	used in AK Version 1.10	Delete the null field in the root causes.					
	used in AK Version 1.10	Need to be able to edit "Facility Information" field.					
		When an edit is needed in "Facility Information," adding a new facility is the only option.					
<i>Comments on Reports</i>							
	used in AK Version 1.10	Table 2-1 - want to be able to display this table as it is (by protocol order) and by frequency of findings.					
	used in AK Version 1.10	Secondary root cause display - the display chart is ordered by root cause code - not by frequency distribution. Also there are no clues as to what the root causes are.					
	used in AK Version 1.10	It would be nice to be able to see the root cause distribution within an individual protocol.					
	used in AK Version 1.10	Need to be able to generate all the same reports the old ECAS software generated.					

## Appendix E: Revised List of Documents Requiring Review

<b>Program Management TEAM</b>	<b>Assessment Team Folders</b>
General Installation environmental SOPs/Policies Training program records Notices of violations, Consent Orders, or other regulatory orders	General ECAS Letter Road maps Site plans for each site PVQs and POC for each facility Installation environmental SOPs/policies Previous findings
Air Quality List of all permits/registrations Emissions inventory	Air Quality Copies of permits/registrations pertinent to sites being assessed by the team
Cultural Resources Cultural Resources Management Plan List of historic facilities	Cultural Resources List of historic facilities
Hazardous Materials Tier I/Tier II reports	Hazardous Materials
Hazardous Waste Site list with generator status Hazardous Waste Management Plan Disposal/recycling records Waste stream inventory Biennial hazardous waste reports	Hazardous Waste Site list with generator status
Natural Resources Natural Resources Management Plans List of sites in protected areas or with endangered species	Natural Resources List of sites in protected areas and/or with endangered species
Other Environmental Issues EAs, EISs, and other sample NEPA documentation	Other Environmental Issues List of cleanup sites



<b>Program Management TEAM</b>	<b>Assessment Team Folders</b>
List of active, temporarily closed, and inactive ranges List of cleanup sites ICUZ studies	List of active, temporarily closed, and inactive ranges
Pesticides Management List of sites where non-contract pesticide application is done Installation Pest Management Plan Copy of applicator certification	Pesticides Management List of sites where non contract pesticides application is done Copy of applicator certification
POL Management SPCC and list of sites with SPCCP Sample ISCP and distribution list	POL Management
Solid Waste List of known active and closed landfills	Solid Waste List of known active and closed landfills
Storage Tank Management Tank inventory Tank registrations/permits Tank closure/removal projects list (past, present, future) Tank tightness testing records	Storage Tank Management Tank inventory Tank registrations/permits Tank closure/removal projects list (past, present, future) Tank tightness testing records
Toxic Substances Management PCB Inventory Asbestos survey Asbestos Management Plan Radon surveys LBP surveys	Toxic Substances Management Survey results for facilities where a problem was identified
Wastewater Management List of permitted sites (point source and nonpoint source)	Wastewater Management List of permitted sites (point source and nonpoint source) Copies of permits
Water Quality List of sites performing drinking water treatment	Water Quality List of sites performing drinking water treatment

## Appendix F: Paperwork Review

Look for the following pieces of paperwork, if applicable

1. Air Permits. What are the permits for: \_\_\_\_\_ What is the date on the permit: \_\_\_\_\_ Are there any special monitoring requirements on the permits? \_\_\_\_\_ If yes, do monitoring records indicate compliance? \_\_\_\_\_
2. Is there a hazardous materials inventory? \_\_\_\_\_ Are there typical EPCRA reportable substances on the list? \_\_\_\_\_
3. Does the facility have its hazardous waste manifest for all shipments for the last 3 years? \_\_\_\_\_ Look for the return copies and LDR reports. What is the largest total quantity of hazardous waste shipped out in the past year? \_\_\_\_\_
4. Does the facility have a copy of the hazardous waste management plan? What is the date of the plan? \_\_\_\_\_
5. Is there documentation that facility personnel have been trained in hazardous waste management? \_\_\_\_\_
6. If the facility is a SQG or LQG do they have a hazardous waste contingency plan or does their spill plan address hazardous waste issues? \_\_\_\_\_  
\_\_\_\_\_
7. Does the facility have a records of pesticides being applied at their facility? \_\_\_\_\_
8. If facility personnel are performing the application, is there a copy of the applicator certification available to review? \_\_\_\_\_
9. Does the facility have an SPCC? \_\_\_\_\_ What is the date on the SPCC? \_\_\_\_\_  
\_\_\_\_\_

Is it signed by a PE?\_\_\_\_\_ Does the plan cover all storage of POL products?\_\_\_\_\_

Has storage/processes changed since the plan was written? \_\_\_\_\_?

10. Does the facility have an ISCP?\_\_\_\_\_ What is the date? \_\_\_\_\_

11. Does the facility have any tank (aboveground and below ground) monitoring records?\_\_\_\_\_ What kind of monitoring?\_\_\_\_\_

12. Does the facility have an UST closure records?\_\_\_\_\_

13. If asbestos is present, does the facility have an Asbestos Operation and Management Plan?

14. If LBP is present, does the facility have a LBP Management Plan?

15. Does the facility have any wastewater discharge permits? What are the permits for:\_\_\_\_\_ What is the date on the permit? \_\_\_\_\_

Are there any special monitoring requirements on the permits?\_\_\_\_\_

If yes, do monitoring records indicate compliance?\_\_\_\_\_

16. If the facility treats its own drinking water, are there monitoring records? \_\_\_\_\_  
Do monitoring records indicate compliance?) \_\_\_\_\_  
\_\_\_\_\_

17: Does the facility have copies of installation environmental SOPs (list to look for provided by the QA/QC team).

## Appendix G: SCS Form

Suggestion on printout format for SCS list, using pesticide headers as an example and the state of Wyoming. This is not based in real checklist item numbers.

### WINCASS CONDITIONS LIBRARY

CODE	ORDER	CONDITION
PM.001: All Installations/Facilities		
PM.001.01.ARNG.0000	01	XXXXXXXXXXXXXXXXXXXXX
PM.001.01.TEAM.0000	01	
PM.001.01.ZZWY.0000	01	
PM.001.02.TEAM.0000	01	
PM.001.02.TEAM.0000	03	
PM.001.02.ZZWY.0000	01	
etc		
PM.002: Missing Checklist Items		
PM.002.01.TEAM.0000	01	
PM.003: State/Local Checklist Items		
PM.003.01.TEAM.0000	01	
PM.005: Pesticide Applicators		
PM.005.01.ARNG.0000	01	
PM.005.01.TEAM.0000	01	
PM.005.01.ZZWY.0000	01	
PM.005.02.ARNG.0000	01	
PM.005.02.ARNG.0000	03	
PM.005.03.ARNG.0000	01	
PM.010: Pesticide Application: General		
PM.020: Agricultural Pesticides		
PM.045: Storage, Mixing, or Preparation Areas		
PM.055: Disposal		

## Appendix H: Installation Previsit Questionnaire (PVQ)

State ECAS POC: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Email: \_\_\_\_\_

	YES	NO
<b>Air Emissions</b>		
Does the installation have an individual responsible for managing the air emissions program? If yes, who? _____		
Does the installation have any SOPs specific to air emissions issues? If yes, pertaining to what? _____ _____ (Please provide copies for all teams of SOPs to be assessed).		
Does the installation have any air permits (construction, operations, Title V)? If yes, how many and where? _____ _____ (Please provide a list for all teams if a larger number of permits exist than is convenient to indicate here).		
Does the installation have any facilities located in ozone nonattainment areas? If yes, which facilities? _____ _____ _____		
Has the installation performed an air emissions inventory? If yes, where is the copy kept and when was the inventory performed? _____ _____		
Is there any dry cleaning equipment located at facilities in the installation? If yes, has the yearly perchloroethylene consumption report been submitted to the		

	YES	NO
regulator? (Please provide copy for the QA/QC team).		
Does the installation have a central location for the distribution of Class I or Class II substances? If yes, be prepared to show QA/QC team the invoices.		
<b>Cultural Resources</b>		
Does the installation have an individual responsible for managing the cultural resources management program? If yes, who? _____		
Does the installation have any SOPs specific to cultural resources issues? If yes, pertaining to what? _____ _____ (Please provide copies for all teams of SOPs to be assessed).		
Has an inventory of properties eligible for inclusion in the National Register been conducted? If yes, please provide copy to QA/QC team.		
Does the installation have an Installation Cultural Resources Management Plan? If yes, what is the date of the most recent signed plan? _____ (Please provide a copy for the QA/QC team.)		
Has the installation performed any conservation self-assessments? If yes, where? _____		
Are construction projects on potentially historic building coordinated with the environmental office?		
Have there been archeological/Indian sites uncovered at any installation facilities? If yes, where? _____ _____ _____		
<b>Hazardous Materials</b>		
Does the installation have an individual responsible for managing the EPCRA program? If yes, who? _____		
Does the installation have any SOPs specific to hazardous materials issues? If yes, pertaining to what? _____ _____ (Please provide copies for all teams of SOPs to be assessed).		

	YES	NO
Do any guard personnel transport hazardous materials on public roads?		
<b>Hazardous Waste</b>		
Does the installation have an individual responsible for managing the hazardous waste program? If yes, who? _____		
Does the installation have any SOPs specific to hazardous waste issues? If yes, pertaining to what? _____  (Please provide copies for all teams of SOPs to be assessed).		
Does the installation have a hazardous waste management plan? If yes, what is the date on the most current, signed copy? _____ (Please provide a copy to the QA/QC team.)		
Are the following handled as hazardous waste throughout the installation? Oily Rags Rags contaminated with solvents Waste solvents Weapons patches Fluorescent light bulbs Antifreeze Waste paint Oil filters Fuel filters Lead acid batteries Cadmium, Nicd, or magnesium batteries Mixed waste fuels Waste oil Aerosol cans	_____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____
Are any of the facilities in the installation LQGs? If yes, which facilities? _____ _____		
Are any of the facilities in the installation SQGs? If yes, which facilities? _____ _____		
Are any of the facilities in the installation CESQGs? If yes, which facilities? _____ _____		

	YES	NO
Has the installation sponsored hazardous waste training for its' personnel? If yes, please provide a copy of the class syllabus to team members.		
Does the installation utilize the concept of universal waste management?		
Do installation personnel transport hazardous waste?		
<b>Natural Resources</b>		
Does the installation have an individual responsible for managing the natural resources program? If yes, who? _____		
Does the installation have any SOPs specific to natural resources issues? If yes, pertaining to what? _____ _____ (Please provide copies for all teams of pertinent SOPs to be assessed).		
Does the installation occupy any withdrawn lands?		
Does the installation have an Integrated Natural Resources Management Plan? If yes, what is the date on the most current, signed version? _____ (Please provide a copy to the QA/QC team.)		
Does the installation have any of the following? (Indicate where) Wetlands _____ _____ Floodplains _____ _____ Coastal Zones _____ _____		
Does the installation have a Fish and Wildlife Management Program?		
Does the installation have any endangered species? If yes, where? _____ _____ _____		
Does the installation have an Endangered Species Management Plan? If yes, what is the date on the most recent signed copy? _____ (Please provide a copy to the QA/QC team.)		
<b>Other Environmental Issues: NEPA</b>		



	YES	NO
Does the installation have an individual responsible for managing the NEPA program? If yes, who? _____		
Does the installation have any SOPs specific to NEPA issues? If yes, pertaining to what? _____ _____ (Please provide copies for all teams of SOPs to be assessed).		
Have all training areas undergone NEPA review? (list areas that have undergone NEPA review) _____ _____ _____ _____ _____		
<b>Other Environmental Issues: Environmental Noise</b>		
Does the installation have an individual responsible for managing the environmental noise program? If yes, who? _____		
Does the installation have any SOPs specific to environmental noise issues? If yes, pertaining to what? _____ _____ (Please provide copies for all teams of SOPs to be assessed).		
Is the installation aware of any facility ever receiving a complaint about noise being generated by activities at the facility? If yes, where? _____ _____		
<b>Other Environmental Issues: IRP</b>		
Does the installation have any cleanup projects underway? If yes, where? _____ _____ _____		
Does the installation have any sites on the NPL?		
Does the installation have any BRAC activities?		
Does the installation have any FUDS activities?		
Does the installation have a Technical Review Committee (TRC)?		

	YES	NO
<b>Other Environmental Issues: Pollution Prevention</b>		
Does the installation have an individual responsible for managing the pollution prevention program? If yes, who? _____		
Does the installation have any SOPs specific to pollution prevention issues? If yes, pertaining to what? _____ _____ (Please provide copies for all teams of SOPs to be assessed).		
Does the installation have a Pollution Prevention Management Plan? If yes, what is the date on the most recent, signed copy? _____ (Please provide a copy to the QA/QC team).		
Does the installation have an affirmative procurement program? If yes, what materials are included in the installations affirmative procurement program? _____		
Does the installation have a program to reduce the emissions of air pollutants by DOD nontactical vehicles?		
Has the installation conducted Pollution Prevention Opportunity Assessments at all of its facilities?		
<b>Other Environmental Issues: Program Management</b>		
Does the installation have an EQCC? If yes, how frequently does it meet? _____		
Is the Environmental Office routinely consulted about changes/activities at facilities that have environmental impacts (i.e., construction, mission changes, process/activity changes).		
<b>Pesticides Management</b>		
Does the installation have an individual responsible for managing the pesticides management program? If yes, who? _____		
Does the installation have any SOPs specific to pesticide management issues? If yes, pertaining to what? _____ _____ (Please provide copies for all teams of SOPs to be assessed).		
Does the installation have an Integrated Pest Management Plan? If yes, what is the		

	YES	NO
date on the most recent, signed copy? _____ (Please provide a copy to the QA/QC team).		
Does anyone at the installation apply pesticides? If yes, list the facilities? _____ _____ _____		
Is anyone at the installation a certified applicator?		
Does the installation have any contracts for pesticide application?		
<b>POL Management</b>		
Does the installation have an individual responsible for managing the POL program? If yes, who? _____		
Does the installation have any SOPs specific to POL management issues? If yes, pertaining to what? _____ _____ (Please provide copies for all teams of SOPs to be assessed).		
Does the installation have an ISCP? If yes, what is the date of the most current, signed, version? _____ (Please provide a copy to the QA/QC team).		
Has the installation prepared SPCC Plan for any of its facilities? If yes, please list the facility and the date of the most recent plan. _____ _____ _____		
<b>Solid Waste Management</b>		
Does the installation have an individual responsible for managing the solid waste program? If yes, who? _____		
Does the installation have any SOPs specific to solid waste issues? If yes, pertaining to what? _____ _____ (Please provide copies for all teams of SOPs to be assessed).		
Does the installation have an Integrated Solid Waste Management Program? If yes, provide a copy to the QA/QC team.		

	YES	NO
Is the installation aware of any facilities generating medical waste? If yes, list facilities _____ _____		
<b>Storage Tank Management</b>		
Does the installation have an individual responsible for managing the storage tank management program? If yes, who? _____		
Does the installation have any SOPs specific to storage tank management issues? If yes, pertaining to what? _____ _____ (Please provide copies for all teams of SOPs to be assessed).		
Does the installation have a storage tank inventory? (both above ground and underground). If yes, please provide a copy for all teams.		
Is the storage tank inventory complete and up-to-date?		
Does the installation have a UST removal/upgrade program? If yes, please provide copies of documentation on where tanks have been removed/upgraded and where future removals/upgrades are planned.		
<b>Toxic Substances: PCBs</b>		
Does the installation have an individual responsible for managing the PCB program? If yes, who? _____		
Does the installation have any SOPs specific to PCB issues? If yes, pertaining to what? _____ _____ (Please provide copies for all teams of SOPs to be assessed).		
Do any installation personnel work with PCBs?		
Has the installation done a PCB inventory?		
<b>Toxic Substances: Asbestos</b>		
Does the installation have an individual responsible for managing the asbestos program? If yes, who? _____		
Does the installation have any SOPs specific to asbestos issues?		

	YES	NO
<p>If yes, pertaining to what? _____</p> <p>_____</p> <p>(Please provide copies for all teams of SOPs to be assessed).</p>		
<p>Has the installation conducted asbestos surveys at all of the facilities being assessed? If no, which facilities have not had a survey? _____</p> <p>_____</p> <p>_____</p>		
<p>Has the installation developed Asbestos Operations and Management Plans for facilities with identified asbestos? If yes, indicate which facilities have such plans?</p> <p>_____</p> <p>_____</p> <p>_____</p>		
<b>Toxic Substances: Radon</b>		
<p>Does the installation have an individual responsible for managing the radon program?</p> <p>If yes, who? _____</p>		
<p>Does the installation have any SOPs specific to radon issues?</p> <p>If yes, pertaining to what? _____</p> <p>_____</p> <p>(Please provide copies for all teams of SOPs to be assessed).</p>		
<p>Has the installation conducted radon surveys at all of the facilities being assessed? If no, which facilities have not had a survey? _____</p> <p>_____</p> <p>_____</p>		
<p>Has the installation performed radon mitigation at any facilities? If yes, list the facilities _____</p> <p>_____</p>		
<b>Toxic Substances: Lead Based Paint</b>		
<p>Does the installation have an individual responsible for managing the lead based paint program? If yes, who? _____</p>		
<p>Does the installation have any SOPs specific to lead based paint issues?</p> <p>If yes, pertaining to what? _____</p> <p>_____</p> <p>(Please provide copies for all teams of SOPs to be assessed).</p>		

	YES	NO
Has the installation conducted lead based paint surveys at all of the facilities being assessed? If no, which facilities have not had a survey? _____ _____ _____		
<b>Wastewater Management</b>		
Does the installation have an individual responsible for managing the wastewater program? If yes, who? _____		
Does the installation have any SOPs specific to wastewater issues? If yes, pertaining to what? _____ _____ (Please provide copies for all teams of SOPs to be assessed).		
<b>Water Quality</b>		
Does the installation have an individual responsible for managing the water quality program? If yes, who? _____		
Does the installation have any SOPs specific to water quality issues? If yes, pertaining to what? _____ _____ (Please provide copies for all teams of SOPs to be assessed).		
Does the installation have any facilities with drinking water wells?		
Has the installation closed any drinking water wells? If yes, where? _____ _____		
Does the installation have any facilities operating recreational waters? (i.e., beaches, swimming pools). If yes, where? _____ _____		

## Appendix I: Facility PVQ

Facility Name: \_\_\_\_\_

Facility Address: \_\_\_\_\_

Facility POC \_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_ Email: \_\_\_\_\_

	YES	NO
<b>General</b>		
Does the facility have any environmental permits? If yes, what are they for? _____ _____		
<b>Air Emissions</b>		
Does the facility have any boilers? If yes, how many and what size? _____		
Does the facility have any incinerators? If yes, how many and what size? _____		
Does the facility have any fuel dispensing pumps? If yes, what types of fuel are being dispensed? _____ _____		
Do facility personnel repair coolant systems in appliances/vehicles?		
<b>Cultural Resources</b>		
Does the facility have any buildings that are 45 years or older? If yes, list the buildings and ages? _____ _____ _____		
Does the facility have any displays of memorabilia?		
Has the facility ever dug up any artifacts/grave sites/ etc?		

	YES	NO
<b>Hazardous Materials</b>		
Is gasoline stored at the facility? If yes, what is the total quantity (tanks and other containers) _____ _____		
Is diesel stored at the facility? If yes, what is the total quantity (tanks and other containers) _____		
Does the facility store any solvents? If yes, what is the total quantity (tanks and other containers) _____		
Does the facility have an up-to-date hazardous materials inventory?		
<b>Hazardous Waste</b>		
What is the greatest amount of hazardous waste generated in one month in the past year? _____		
What is the normal amount of hazardous waste generated in one month? _____		
What is the date of the most current hazardous waste management plan on file at the facility? _____		
What are the typical hazardous wastes generated at the facility? _____ _____ _____ _____		
<b>Natural Resources</b>		
Does the facility have any wetlands?		
Is the facility located in a coastal zone?		
Is the facility located on a floodplain?		
Where do facility personnel conduct training exercises ? _____ _____		



	YES	NO
_____		
Does the facility have any endangered species? If yes, what? _____ _____		
<b>Other Environmental Issues: NEPA</b>		
<b>Other Environmental Issues: Environmental Noise</b>		
Has the facility ever received a complaint about noise being generated by activities at the facility?		
<b>Other Environmental Issues: Pollution Prevention</b>		
<b>Other Environmental Issues: Program Management</b>		
<b>Pesticides Management</b>		
Does anyone at the facility apply pesticides? If yes, list the pesticides? _____ _____ _____		
Is anyone at the facility a certified applicator?		
Does the facility have any contracts for pesticide application?		
<b>POL Management</b>		
What is the capacity of the largest POL aboveground storage tank at the facility? _____		
What is the total capacity for POL stored underground? _____		
What is the total amount of POL storage aboveground (AST and container storage)? _____		
Who is responsible for responding to POL spills at the facility? _____ _____		
How is used oil disposed of at the facility? _____ _____ _____		

	YES	NO
<b>Solid Waste Management</b>		
Does the facility recycle anything? If yes, what? _____ _____ _____		
Does the facility have an old/closed landfill?		
Does the facility currently operate a landfill and/or dump?		
Does the facility generate any medical/pathological waste?		
<b>Storage Tank Management</b>		
Does the facility have any USTs? If yes, how many, what is their individual capacity and contents? Capacity                  Contents                  Location _____ _____ _____		
Does the facility have any ASTs? If yes, how many, what is their individual capacity and contents? Capacity                  Contents                  Location _____ _____ _____		
<b>Toxic Substances: PCBs</b>		
Does the facility have any PCB transformers? If yes, how many and where are they located? _____ _____		
Does the facility have any PCB capacitors? If yes, how many and where are they located? _____ _____		
Does the facility have any PCB ballasts? If yes, how many and where are they located? _____		

	YES	NO
_____		
<b>Toxic Substances: Asbestos</b>		
Does the facility have the results of any asbestos surveys conducted onsite?		
Have there been any asbestos remediation efforts at the facility? If yes, when and where? _____ _____		
<b>Toxic Substances: Radon</b>		
Has a radon survey been conducted at the facility?		
<b>Toxic Substances: Lead Based Paint</b>		
Has a LBP survey been done at the facility?		
<b>Wastewater Management</b>		
Does the facility have any oil/water separators? If yes, how many and where are they located? _____ _____ _____		
Does the facility have a washrack? If yes, how many and where are they located? _____ _____ _____		
Does the facility discharge to a septic field?		
Does the facility discharge to a local POTW?		
<b>Water Quality</b>		
Does the facility get its drinking water from the local community?		
Does the facility have an active well?		
Does the facility have an inactive well?		

### Distribution

Chief of Engineers

ATTN: CEHEC-IM-LH (2)

ATTN: CEHEC-IM-LP (2)

ATTN: CECC-R

ATTN: CERD-L

ATTN: CERD-M

National Guard Bureau

ATTN: ARNGRC/NBG-ARE (2)

Defense Tech Info Center 22304

ATTN: DTIC-O (2)

11

3/98