

**RESTORATION ADVISORY BOARD (RAB) MEETING
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT CALVERTON
NAVY BUILDING 170, NWIRP CALVERTON, NEW YORK
AUGUST 4, 1998**

The second meeting of the RAB began at 7:30 pm and ended at 9:45 pm. RAB members attending were: community members Sid Bail, Lorraine Collins, Louis Cork, Herb Golden, Bill Gunther, Sherry Johnson, Randolph Manning, Ann Miloski, Joe Pannone, Vanie Tuthill, and Warren Voegelin; Joe Maiorana representing the Town of Riverhead; Martin Simonson representing DCMC; and Navy members Judith Hare, and Jim Colter. Members absent included community members Henry Bookout, Jean Mannhaupt, Bob Pohlman, and John Quinn and representatives from New York State Department of Environmental Conservation (NYSDEC), New York State Department of Health (NYSDOH), Suffolk County Department of Health Services (SCDHS), U.S. EPA Region II, and the Nature Conservancy.

In addition, there were approximately 20 people from the general public attending the meeting.

WELCOME AND AGENDA REVIEW

Judith Hare, the Navy Co-Chair, welcomed everyone and introduced Sherry Johnson, the Community Co-Chair for the RAB. RAB members and other attendees of the meeting were given copies of the presentation materials. In addition, RAB members were given larger binders for their RAB Workbooks to replace the smaller binders handed out at the April 1998 RAB meeting. Materials handed out to date should be moved from the smaller binder to the larger binder.

REVIEW AND APPROVAL OF MINUTES

The stenographer transcripts from the April 28, 1998 RAB meeting were paraphrased and summarized into meeting minutes. The minutes were mailed out to all the RAB

members for review. No comments were made on the April 28, 1998 RAB meeting minutes and the minutes were approved as written. It was noted that the stenographer's transcript and the meeting minutes are available for review in the NWIRP Calverton Information Repository at Riverhead Free Library (behind the Reference Desk). The Information Repository has been recently updated and historical documents and an updated index are available at the library.

RAB OPERATING PROCEDURES AND WORKBOOK APPROVAL

Comments were made by the RAB that the operating procedures in the RAB Workbook were general and could be loosely interpreted. It was noted that the operating procedures are generic to start with and the community needs to mold the procedures to best serve their needs. The operating procedures can be amended by future consent of the membership.

After some discussion on the functions of two proposed subcommittees, a motion was made and approved to establish a steering subcommittee and a membership subcommittee. The steering subcommittee will meet at least once in between regular RAB meetings to discuss questions the RAB members may want to raise at the RAB meetings, agenda items they want to see on the agenda, and any concerns that they have encountered in between RAB meetings. The membership subcommittee will meet as necessary and will consider requests for membership and look for new members to fill vacancies, as necessary.

RAB members present were asked to sign and date a sign off sheet indicating their approval of the RAB operating procedures and workbook. It was indicated that the operating procedures may be changed in the future by vote of the RAB, but by signing the sheet, RAB members were showing approval for the initial procedures provided in the RAB Workbook. The signed sheet will be incorporated into the RAB Workbook.

RAB members were asked to review their address and phone numbers provided in Section 1 of the RAB Workbook (Revision 1 dated August 1998 of Section 1 was

provided at the meeting) to confirm that the information provided is correct. Corrections and changes should be given to Debbie Cohen of Tetra Tech NUS, Inc.

ELECTION OF NEW MEMBER

The RAB received a request for membership from the Montaukett Indian tribe. Although it was felt that the RAB may want to limit membership, it is early enough in the establishment of the RAB to add a new member. It was also noted that the Montaukett tribe had a legitimate request to be represented on the RAB. The tribe had selected Ms. Lorraine Collins to be their representative on the RAB. A motion was made and approved to accept Ms. Collins as a community member on the RAB. Ms. Collins was welcomed aboard and participated in the remainder of the meeting as a RAB member. The total number of RAB members is now 24.

DoD's TECHNICAL ASSISTANCE FOR PUBLIC PARTICIPATION (TAPP) PROGRAM

Jim Colter of the Northern Division of the Naval Facilities Engineering Command provided a presentation on the Department of Defense (DoD) Technical Assistance for Public Participation (TAPP) program. A copy of the presentation is provided as an attachment to these meeting minutes. The TAPP program is a new initiative that the DoD has established which is similar to the U.S. EPA's Technical Assistance Grant (TAG) program (available for sites listed on the National Priorities List [NPL]). The National Defense Authorization Act of 1996, passed in February 1998, provides for the DoD to provide technical support to community members of RABs and Technical Review Committees (TRCs). The goal of the program is to enhance the public's understanding and acceptance of what the Navy is doing in its environmental cleanup program by providing funds for community members to obtain objective, independent (third party) scientific and engineering support concerning the restoration process.

The program has a \$25,000 annual and \$100,000 lifetime limit per facility so the RAB will need to select which projects they want to pursue. Eligible projects include

interpretation of technical documents, technical training (e.g., risk assessment training), and review of proposed remedial technologies. Ineligible projects include use of funds for political activities and lobbying, litigation, legal action, or legal representation, generation of new data (sampling), health studies, and community outreach fact sheets. Eligible projects must meet one of two criteria provided in the National Defense Authorization Act: the RAB must demonstrate that the Federal, state and local agencies responsible for overseeing environmental restoration at the installation do not have the technical expertise to provide the training or information the RAB requires; or the assistance will likely contribute to the efficiency, effectiveness, and timeliness of the Navy cleanup program and is likely to contribute to the RAB overall acceptance of the Navy's plan. In addition, the request for assistance must represent the majority of the RAB. When the RAB requests assistance, the Navy is responsible for contract management and assisting the RAB in selecting a provider for the training or technical interpretation. However, the final selection is up to the RAB.

Before pursuing assistance for a project, it is important for the RAB to first evaluate whether the information (training or technical interpretation) can be provided without the assistance. Can the Navy, their contractors, or other available agencies provide the information? If the answer is no, than a TAPP request form is filled out and submitted. Although the Navy hopes they are doing an adequate job to provide the RAB the information they need, there are situations where the RAB may feel a third party is necessary to provide the information they require for evaluation of the environmental restoration.

NAVY'S SITE RISK RANKING

Dunnie Wingo of the Northern Division of the Naval Facilities Engineering Command provided a presentation of the Navy's site risk ranking and relative risk site evaluation model. A copy of the presentation is provided as an attachment to these meeting minutes. The Navy started this program in 1993 to provide a program to rank the over 5,000 DoD sites to determine funding priority. It is one tool used to establish on a priority basis, which sites to address first. Other sources of input in the determination of priority include regulator and RAB input. Therefore, a site ranked as low or medium

may be addressed before a high ranked site if regulator or RAB input indicate this is important.

The relative risk looks at maximum chemical concentrations detected in surface soil (0 to 2 feet below ground surface), groundwater, sediment, and surface water and at the people and environment potentially exposed to those chemicals. Three key factors are evaluated; contaminant hazard factor (CHF), migration pathway factor (MPF), and receptor factor (RF). The relative potential hazard related to the chemical and its concentration at the site, the potential for the chemicals to move from one place to another or from one media to another, and the likelihood that people or the environment are or could be exposed to the chemicals at the site are evaluated to determine the ranking of the site.

The relative risk is not a substitute for a risk assessment and the process/input parameters used in the relative risk evaluation differ from those used for risk assessment. The relative risk evaluation is simply one mechanism to compare sites to determine which sites should be addressed first. A risk assessment is necessary to determine whether chemicals are present at a site that may be a risk to human health and the environment (and therefore require remedial action).

The latest round of data from the Phase 2 RRCA Facility Investigation (RFI) was used in the evaluation of NWIRP Calverton sites. The ranking for Sites 1, 2, 6, and 7 was high, for Site 9 was medium, and for Site 10 was low (see presentation handout attached to these minutes). The Navy plans to provide the RAB with the Phase 2 RFI reports for the sites and the relative risk evaluation for review and comment.

The Navy noted that the program is revisited as necessary as new data is available for a site. Generally the ranking is conducted at the initial investigation stage (preliminary assessment or site investigation) and then revised as necessary based on data collected in subsequent investigations.

Regulator agencies have input into the priority of a site, however, it was noted that no regulators were in attendance at the meeting. In answer to a question of who is

responsible for making sure the regulators show up at the RAB meetings, it was indicated that the regulators receive the same announcement of the RAB meetings as the community RAB members and it is up to the regulators whether they chose to participate in the RAB meetings. However, the regulators and Navy meet at technical meetings to make environmental decisions and the results are presented at RAB meetings.

DATES AND DISCUSSION TOPICS FOR FUTURE MEETINGS

Presenting the data and results of the Phase 2 RFI reports was suggested as a potential topic for the next RAB meeting. The steering subcommittee will also be looking at possible discussion topics. A meeting of the steering subcommittee will be held the end of September/beginning of October. Sherry Johnson will arrange the meeting. Also, RAB members can make suggestions for discussion topics to Sherry Johnson or the Navy.

The RAB meetings are held quarterly and the RAB members present discussed holding the meeting on the first Wednesday of the month. The next meeting was tentatively scheduled for November 4, 1998. Possibly meeting locations include the Masonic Lodge (1246 Roanoke Avenue) and Suffolk County Community College.

CLOSING REMARKS

In closing, Judith Hare thanked everyone for attendance at the RAB meeting and was very pleased to see the good community turnout at the meeting.

ATTACHMENTS

- Agenda
- Presentation of the DoD's Technical Assistance Public Participation (TAPP) Program
- Presentation of the Navy's Site Risk Ranking Program

Agenda

Restoration Advisory Board Naval Weapons Industrial Reserve Plant Calverton

**August 4, 1998
NWIRP Calverton, Calverton, NY
7:30 p.m.**

Welcome and Agenda Review

Judithanne Hare
Naval Air Systems Command

Review and Approval of Minutes

All Members

RAB Operating Procedures and Workbook Approval

All Members

Election of New Member

All Members

DoD's Technical Assistance for Public Participation (TAPP) Program

Jim Colter
Naval Facilities Engineering Command - Northern Division

Navy's Site Risk Ranking

Dunnie Wingo
Naval Facilities Engineering Command - Northern Division

Dates and Discussion Topics for Future Meetings

All Members

Closing Remarks

Judithanne Hare
Naval Air Systems Command

Presenters will be available after the program for questions.



Technical Assistance for Public Participation (TAPP) in DoDs Environmental Restoration Program

Overview of the TAPP Program

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The Basics of the TAPP Program

- What is it?
- What is the purpose behind TAPP?
- Who is it for?
- How does it benefit DoD?
- How is assistance provided?
- What kinds of projects are eligible?
- Roles and Responsibilities

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TAPP - What is it?

From National Defense Authorization Act of 1996:

- Technical Assistance for Public Participation is a program that can provide independent assistance in interpreting scientific and engineering issues with regard to the nature of environmental hazards and restoration activities at an installation.
- The goal of the program is to enhance the public's ability to participate in the decision-making process by improving their understanding of overall conditions and activities

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TAPP - Why have it?

- Involve the public - they have a right to be involved
- Demonstrate commitment to the community
- Enable community to participate in technical aspects of restoration program
- Provide community a source of credible expertise
- Restore Trust if Navy credibility is low

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Trust and Credibility on Environmental Issues

Most credible



Least Credible

- Local citizen/advisory panel--perceived to be neutral, respected, and well informed
- Non-management employees
- Health/safety professionals
- Media
- Environmental Groups
- Industry
- Federal Government
- Environmental Consultants from "for profit" firms

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TAPP - Who is it for?

- Community members of RABs
 - Residents of community affected by installation with a "demonstrated" need for technical assistance

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TAPP - How does it benefit DoD?

- Promotes DoD as a good neighbor
- Increased confidence in DoD's program by allowing it to be subjected to outside review
- Increases the community's confidence in DoD's program as they see DoD's willingness to share information and listen to an outside point of view
- More responsive cleanups

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TAPP - How is the Assistance Provided?

- The DoD will provide the technical assistance by:
 - Procuring a Technical Assistance Contractor
 - Will utilize community member input in selection
 - Uses existing environmental restoration funds
 - Limits on dollar value of TAPP contracts (allows the use of simpler acquisition procedures)
 - \$25,000 or 1% of Cost to Complete annual limit (whichever is less)
 - \$100,000 lifetime limit

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Benefits of DoD Managing TAPP Contract

- Eliminates burden of contract administration on RAB members
- Only responsibility of RAB members is to complete simple application form
- Incorporation as a “citizen group” not required
- No in-kind matching required

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Eligible Projects

- Interpretation of technical documents
- Review of proposed restoration technologies
- Participate in relative risk site evaluations
- Understand health and environmental implications of sites and cleanup strategies
- Training, as appropriate

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Interpretation of Technical Documents

- Installation restoration program site investigation, engineering, and decisions documents
- Risk assessments, including baseline and ecological risk assessments
- Human health assessments

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Review of Proposed Restoration Technologies

- Understanding the function or implication of technologies selected to investigate or clean up sites
- Consider alternate remedial technologies

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Participate in Relative Risk Site Evaluations

- Understand the relative risk site evaluation process
- Develop inputs into the relative risk site evaluation

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Understand the Implications of Cleanup Strategies

- Interpret the potential health implications of cleanup levels or remedial technologies
- Explain the health implications of site contaminants and exposure scenarios
- Explain the implications of residual contaminants left after the completion of a cleanup strategy.

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Training

- Indendent review of DoD legal requirements
- How to evaluate sampling plans
- Risk assessment procedures
- Elements of technology evaluations

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Ineligible Projects

- Political activities and lobbying
- Litigation or underwriting legal actions
- The generation of new primary data
- Reopening final DoD decisions or conducting disputes with DoD
- Epidemiological or health studies
- Community outreach

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Criteria to Justify if a TAPP Project is Required

Criteria Language contained in NDAA-96:

- 1 The RAB must demonstrate that the Federal, State, and local agencies responsible for overseeing environmental restoration at the installation do not have the technical expertise necessary for achieving the objective for which the technical assistance is to be obtained;

OR

- 2 The technical assistance:
 - a Is likely to contribute to the efficiency, effectiveness, or timeliness of environmental restoration activities at the installation; and
 - b Is likely to contribute to community acceptance of environmental restoration activities at the installation.

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Criteria to Justify if a TAPP Project is Required

A Must meet ONE of the NDAA-96 criteria items:

- 1 Technical expertise is not available elsewhere;

OR

- 2 Technical assistance will contribute positively to installation restoration program and will enhance community acceptance of restoration activities

AND

- B TAPP request must represent a majority of the RABs community membership

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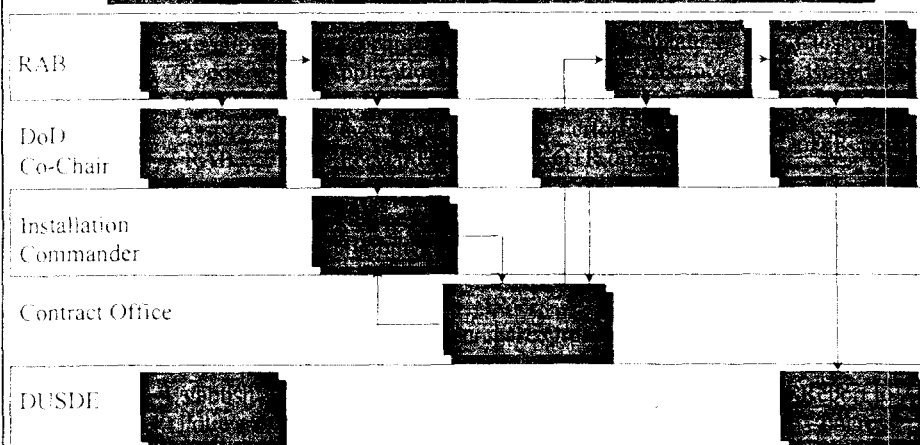
Other Sources of Technical Support

- Installation Restoration Program contractors
- Local, State, and Federal staff
- Universities
- Volunteers
- Environmental Protection Agency
 - Technical Assistance Grants (NPL)
 - Technical Outreach Services for Communities (non-NPL)

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The TAPP Process



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Key Individuals and Responsibilities

- Installation Commanding Officer
- DoD Representatives (DoD Co-Chair)
- Community Members (Community Co-Chair)

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Technical Assistance for Public Participation (TAPP) In DoDs Environmental Restoration Program

Roles and Responsibilities of the Installation Commander

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Installation Commander Responsibilities

- Implementing NDAA-96 requirements
 - Already accomplished by RAB
 - An ineligible project will not be forwarded to CO
- Approving projects
- Recommending waivers
- Appeals

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Approving Projects

- Projects meet the need defined in the RAB community members' request
- Projects meet eligibility criteria
- Adequate funding is available

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Disapproving Projects

- Circumstances warranting disapproval
 - Failure to meet eligibility criteria
 - Funding priorities
 - Alternate available source exists
- Responsibilities to RAB upon disapproval
 - Rationale
 - Alternatives

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Waivers

- TAPP rules set an annual limit on purchase orders at an installation to \$25,000 or 1 % of cost to complete, whichever is less, and \$100,000 over the life of the program
- Waivers may be granted at the discretion of the Deputy Assistant Service Secretary

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The Appeals Process

- Established to provide a process to allow RAB community members to appeal DoD decisions regarding the approval or disapproval of a TAPP project

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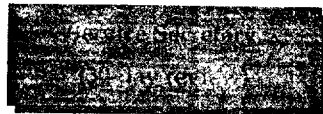
The Appeals Process

- Ground rules for appeal
 - Majority of RAB community members must agree
 - RAB must appoint single spokesperson
 - Written justification must accompany appeal
 - Appeals must follow the chain-of-command and cannot skip levels
 - Goal is to try and resolve at the lowest level possible

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The Appeals Process



Installation Commander
(2-week review)

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Technical Assistance for Public Participation (TAPP) in DoDs Environmental Restoration Program

Roles and Responsibilities of the DoD Representatives and DoD Co-Chair

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DoD Responsibilities

- Informing and training the RAB
- Ensuring that funds are available
- Contract Management
- Working with the RAB
- Working with the Commanding Officer
- Reporting of Results
- Act as “moderator” to reach consensus
- Appeals

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Working with the RAB

- Determine if the TAPP criteria items in NDAA-96 have been met
- Certifying majority request
- Defining and scoping an eligible project
- Certifying search for alternate support
- Proposing a technical assistance provider
- Completing the TAPP request form

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Working with the Commanding Officer

- Recommending project approval/denial
- Recommending waiver decisions regarding funding limitations

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Working with Project Results

- Information repository
- Other publications
 - Newsletters
 - Other public relations efforts
- Public meeting
 - Devote RAB meeting to TAPP results
- Restoration program
 - Incorporate results into the IR Program

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Helping to Aid in Reaching RAB Consensus

- What should the TAPP project be?
 - Pursue top priorities first
- Scope of Work (SOW)
 - What should the TAPP project provide?
 - What selection criteria should be used?
- Preferred provider (or selected provider)
 - Review qualifications required in SOW
 - Review provider qualifications

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DoD Co-Chair's Role in the Appeals Process

- Keep RAB community members informed of process and progress
- Be an advocate for community members
- Brief Commanding Officer
- Be ready with alternatives

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Technical Assistance for Public Participation (TAPP) in DoDs Environmental Restoration Program

Guidance for Community Members of Restoration Advisory Boards

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Developing a Project

- *Understanding DoD's Installation Restoration Program*
- Focusing on your needs
- Coming to Agreement
- Meeting the Requirements of NDAA-96

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Developing a Project

- Understanding the Installation Restoration Program
- *Focusing on your needs*
 - *Eligible projects*
 - *Ineligible projects*
- Coming to Agreement
- Meeting the Requirements of NDAA-96

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Developing a Project

- Understanding the Installation Restoration Program
- Focusing on your needs
- *Coming to Agreement*
- Meeting the Requirements of NDAA-96

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Developing a Project

- Understanding the Installation Restoration Program
- Developing a Project
- Coming to Agreement
- *Meeting the Requirements of NDAA-96*
 - *Can the information be provided without TAPP; or*
 - *Will the TAPP project aid in the RABs understanding and/or acceptance of the issue*

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Preparing a TAPP Request The TAPP Request Form



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Nominating a Provider

- Minimum qualifications are specified in NDAA-96
- RAB can determine additional qualifications

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Nominating a Provider

- Examples of minimum credentials in which the technical assistance provider **“must”** possess:
 - Demonstrated knowledge of hazardous or toxic waste issues and/or laws.
 - Academic training in a relevant discipline (e.g., biochemistry, toxicology, environmental sciences, engineering, law).
 - Ability to translate technical information into terms understandable to lay persons.

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Nominating a Provider

- Examples of other credentials in which the RAB may want to specify that a technical assistance provider **"should"** possess:
 - Experience working on hazardous or toxic waste problems.
 - Knowledge in local geology
 - Experience in making technical presentations.
 - Demonstrated writing skills.
 - Previous experience working with affected individuals or community groups or other groups of individuals.

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Publicizing Results

- Information repository
- Public meetings (RAB meetings)
- Regulatory notification
- Incorporate into IR program

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Completing the Project

- RAB responsibilities for information dissemination
 - All final written documents developed by the technical advisor must be made available to the installation for distribution
- RAB reporting requirement
 - Yearly progress report
 - Final report

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QUESTIONS

AND

ANSWERS

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**Relative Risk
Site Evaluation Framework:
Background, Concept Description,
and Guidelines**

Defense Environmental Restoration Program: New Directions – Relative Risk Site Evaluations

- **DoD Management Guidance promotes use of a Relative Risk site evaluation framework to group sites into high, medium, and low relative risk categories**
- **Framework for accomplishing Relative Risk evaluations developed by interservice work group**
- **Site evaluation framework to be used by Installation and public and regulatory community representatives to identify high, medium, and low sites**
- **Concept accommodates legal obligations to meet regulatory agreements**
- **Concept description and guidelines contained in Relative Risk Site Evaluation Primer**

Benefits of Relative Risk Site Evaluations

- **Framework provides common approach in DoD for categorizing sites by relative risk**
- **Most urgent sites identified**
- **Rating serves as basis for dialogue with stakeholder on sequencing work at sites and formerly used Defense sites**
- **Aids in focusing of resources on high relative risk sites first**

Relative Risk Site Evaluation Framework: Description

- **Framework *is*:**
 - **A method for placing sites or areas of concern into a high, medium, or low relative risk category**
 - **An evaluation of site information at a point in time based on three key factors: CHF, MPF, RF**
- **Framework *is not*:**
 - **An absolute expression of risk**
 - **A substitute for a baseline risk assessment**
 - **A substitute for a health assessment**

Relative Risk Site Evaluation Framework

- **Used to assign a high, medium, or low relative risk to each site or area of concern**
- **Provides a qualitative assessment of contaminant, pathway, receptor relationships**
- **Simple and easy to understand**
- **Does not rely on "Black Boxes" for evaluations**
- **Establish common approach for categorizing sites across DoD Components**
- **Serves as a basis for discussing relative site risks with stakeholders**

Relative Risk Site Evaluation Framework

- **Evaluates source, pathway, receptor relationships in three media**
 - **Groundwater**
 - **Surface water/sediment**
 - **Surface soils**
- **Based on three factors**
 - **Contaminant Hazard Factor (CHF):**
How much contamination?
 - **Migration Pathway Factor (MPF):**
Is contamination moving, will it move?
 - **Receptor factor**
Are there humans or sensitive environments nearby?

Contaminant Hazard Factor (CHF)

- **Comparison of maximum site contaminant concentrations in each media to Relative Risk concentration standards**

$$\text{CHF} = \sum \frac{\text{[maximum concentration of A]}}{\text{Standard for A}}$$

- **Three tiers**
 - **Significant = CHF > 100**
 - **Moderate = CHF of 2 - 100**
 - **Minimal = CHF < 2**

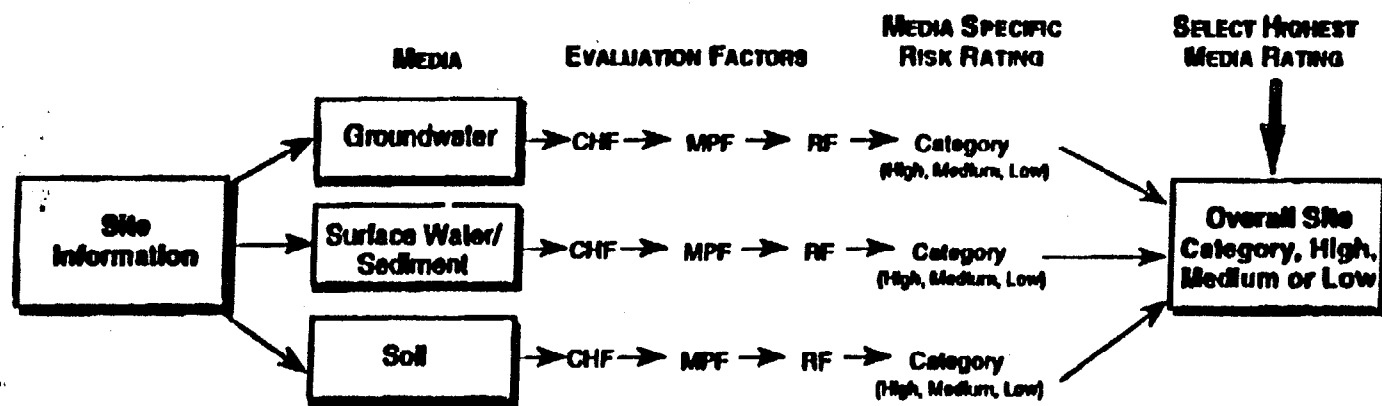
Migration Pathway Factor (MPF)

- **Each media pathway evaluated (groundwater, surface water/sediment, soil)**
- **Three tiers (using groundwater as an example)**
 - **Evident: Contamination in media moving away from source**
 - **Potential: Possibility for contamination to be present at or migrate to a point of exposure; or information not sufficient to make determination of Evident or Confined**
 - **Confined: Potential for contaminant migration from source is limited due to geological structures or physical controls**
- **Opportunity for input from regulators and community**

Receptor Factor

- **Receptors (human or sensitive ecological species/ environments) evaluated for each media**
- **Three tiers (using soil as an example)**
 - **Identified: Receptors have access to contaminated soil**
 - **Potential: Receptors have potential access to contaminated soil**
 - **Limited: Receptors have little or no access to contaminated media**
- **Opportunity for input from regulators and community**

Relative Risk Site Evaluation Framework: Structure and Organization

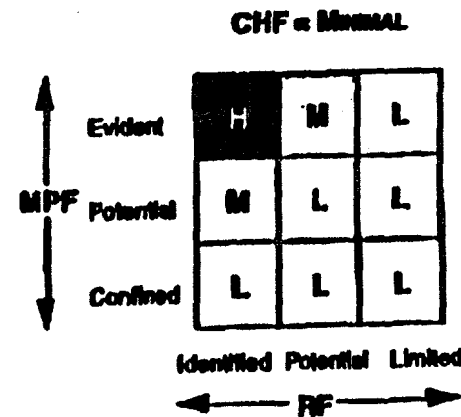
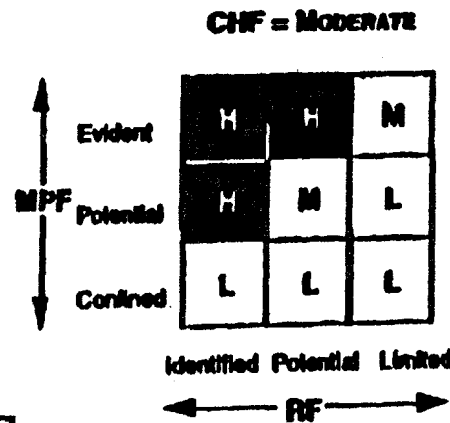
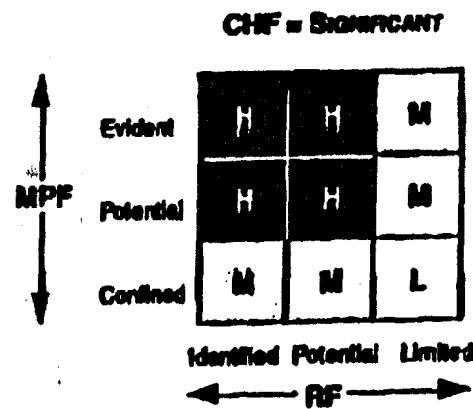


CHF = Contaminant Hazard Factor

MPF = Migration Pathway Factor

RF = Receptor Factor

Relative Risk Site Evaluation Matrix



CHF = Contaminant Hazard Factor
 MPF = Migration Pathway Factor
 RF = Receptor Factor
 H = High
 M = Medium
 L = Low

RISK EVALUATION MATRIX

"X"
SIGNIFICANT CHF

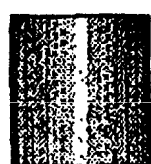
PATHWAYS	Identified	Potential	Limited
Evident	X1	X2	X3
Potential	X4	X5	X6
Confined	X7	X8	X9
	RECEPTORS		

"Y"
MODERATE CHF

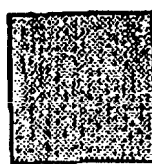
PATHWAYS	Identified	Potential	Limited
Evident	Y1	Y2	Y3
Potential	Y4	Y5	Y6
Confined	Y7	Y8	Y9
	RECEPTORS		

"Z"
MINIMAL CHF

PATHWAYS	Identified	Potential	Limited
Evident	Z1	Z2	Z3
Potential	Z4	Z5	Z6
Confined	Z7	Z8	Z9
	RECEPTORS		



HIGH



MED



LOW

To: FRANCO A LAGRECA@CODE 18@NAVFAC EFDNORTH
Michael J Pound@Code 180@NAVFAC EFDSWEST
Paul J Campbell@Code 18@NAVFAC EFDSOUTH
Byron C Brant@CODE 18@NAVFAC EFDLANT
Liane Rosen@Code 18@NAVFAC EFDPAK
John G Woodburn@Code 18@NAVFAC EFACHES
DUNNIE R WINGO@CODE 18@NAVFAC EFDNORTH
Bela J Varga@Code 09E@NAVFAC EFANW
Jim Brown@Code 18@NAVFAC EFDWEST

Cc:
Bcc:
From: Mike Green@CODE 41@NAVFACHQ
Subject: RRSEM (revised): Delivery of Disks
Date: Tuesday, September 26, 1995 14:16:10 EDT
Attach:
Certify: N
Forwarded by:

Revised program has been sent via overnight mail, leaving Washington this afternoon. Two disks sent to each EFD and EFA by Federal Express (except mail to EFA Midwest was by standard postal service); copies sent to CNO(N-45) and CMC-LFL and NFESC.

Also, i promised you a cross-reference list to the "priority" field now on the "worksheet". That field will not be calculated and entered into your main.mdb until something changes the ranking for a particular site. You can force such calculation by (for example) changing the MPF or RF for one of the ranked media, or by updating the contaminant concentrations, etc. Again, note that you can get the number by "exporting data" and selecting the "SYS_RESERVE" field. See list below for corresponding matrix code for the site:

1	X1
2	Y1
3	X4
4	Y4
5	X2
6	Y2
7	X5
8	Z1
9	Y5
10	Z4
11	Z2
12	X3
13	Y3
14	X6
15	X7
16	X8
17	Z5
18	Y6
19	Z3
20	Z6
21	Y7
22	Y8
23	Z7
24	X9
25	Y9
26	Z8
27	Z9

I have not reviewed the output of the above portion of the program yet, other than to test three examples and see that it does indeed work. Let me know if you have any problems with it.

CALVERTON, NY
IR SITE RANKING

<u>SITE</u>	<u>NAME</u>	<u>RANK</u>	<u>MATRIX*</u>	<u>MEDIA EVAL</u>	<u>RANK SOURCE</u>
1	Northeast Disposal Area	High	4	GW SWEF SEDEF SOIL	SEDEF
2	Fire Rescue Training Area	High	4	GW SOIL	GW SOIL
6	Fuel Calibration Area	High	5	GW SOIL	GW
7	Fuel Depot	High	5	GW SOIL	GW
9	ECM Area	Med	11	GW	GW
10	Cess Pool/ Leach Fields	Low	17	GW	GW

*Matrix

Number from 1 to 27. 1 is the highest of the highs and 27 is the lowest of the lows.

RELATIVE RISK EVALUATION WORKSHEET

SITE (1) BACKGROUND INFORMATION

Installation/Site Name for FUDS <u>CALVERTON NY NPRO</u>	Date Entered (Day, Month, Year): <u>7/30/98</u>
Location (State): <u>NY</u>	Media Evaluated (GW, SW, Sediment, Soil): <u>GW SWEF SEDEF SOIL</u>
Site (Name/RMIS ID) / Project for FUDS: <u>SITE 00001</u>	Phase of Exec. (SI, RI, FS, Remv, RD/RA, or equiv. RCRA Stage): <u>CMS</u>
RMIS Site Type: <u>LANDFILL</u>	Agr. Status (Y/N, If yes, type of agreement e.g., FFA, Permit, Order) <u>Yes</u>
Point of Contact (Name/Phone): <u>JIM COLTER</u>	National Priority List (Y/N): <u>No</u> Site Rank: <u>High</u>

SITE SUMMARY

(Include only key elements of information used to conduct the relative risk site evaluation. Attach map view of site if desired.)

Brief Site Description (Include site type, materials disposed of, dates of operation, and other relevant information):

The northeast pond disposal area is located approximately 1,000 feet south of Middle Country Road (NY Route 25) and about 1 mile east of the north gate. Site 1 was used primarily for the disposal of demolition debris until 1948 when a final soil cover was placed over the disposed material. The disposal area measures approximately 400 feet by 200 feet. Site 1 is adjacent to a pond which is around 2.3 acres in size and has no outlet.

Brief Description of Pathways (Groundwater, Surface Water, Sediment, Soil):

Pathways to be considered at Site 1 include on site surface water/sediment and surface and subsurface soils. The pathway for the on site surface water/sediment, the pathway is through direct dermal contact. For the on site and subsurface soils, the pathways are through direct dermal contact. Another pathway to consider is through future use of on-site groundwater.

Brief Description of Receptors (Human and Ecological):

Receptors include future on site workers through direct contact, future residents (both children and adult) also through direct contact. There are also potential ecological receptors in the form of a wetland area (pond) as well as an identified State of New York endangered species (Tiger Salamander).

(1) Use to record information on Sites and Areas of Concern (AOC) for Relative Risk Site Evaluation. The term Site is defined as a discrete area for which suspected contamination has been verified and req A Site by definition has been, or will be, entered into RMIS. For the FUDS Program, "projects" equates to sites for current installations. An AOC is a discrete area of contamination, or suspected contaminati (or RFA) phase that has not been entered into RMIS.

Ground Water

CONTAMINANT HAZARD FACTOR (1) (CHF)

Contaminant	Maximum Conc. ug/L	Standard ug/L	Ratio (2)
Lead	88.8	4.0	22.200
Manganese	1,875.0	180.0	10.420
Arsenic (noncancer)	15.95	4.5	3.540
Iron	14,500.0	11,000.0	1.320
Beryllium and compounds	1.9	1.6	1.190
Aluminum	25,600.0	37,000.0	0.690
Antimony and compounds	8.8	15.0	0.590
Cadmium and compounds	8.9	18.0	0.490
Mercury and compounds (inorganic)	2.95	11.0	0.270
Chromium VI and compounds	47.0	180.0	0.260
Total:			41.537

(1) Evaluate for human contaminants only
(2) Ratio = Maximum Concentration/Standard
Note: Only top ten contaminants are displayed.

(Place an "X" next to one below)

Significant (If Total > 100):

Moderate (If Total 2 - 100):

Minimal (If Total < 2):

X

MIGRATION PATHWAY FACTOR (MPF)

Evident -

Analytical data or observable evidence indicates that contamination in the media is moving away from the source.

Confined -

Information indicates that the potential for contaminant migration from the source is limited (due to geological structures or physical controls)

(Place an "X" next to one below)

Evident:

Potential:

Confined:

X

Potential -

Possibility for contamination to be present at or migrate to a point of exposure; or information is not sufficient to make a determination of Evident or Confined

Brief Rationale for Selection: Contamination present in Ground water slightly above MCL's. Down gradient monitoring well - s indicate that contaminants are not migrating.

RECEPTOR FACTOR (RF)

Identified -

There is a threatened or potentially threatened water supply downgradient of the source. The GW (cont. or not) is a current drinking water source or is equiv. to (Class I or IIA aquifer).

Limited -

There is no potentially threatened water supply well downgradient of the source. The groundwater is not considered a potential source of DW or is of limited beneficial use (IIIA, IIIB or perched aquifer).

(Place an "X" next to one below)

Identified:

Potential:

Limited:

X

Potential -

There is no potentially threatened water supply well downgradient of the source. The groundwater is potentially usable for DW, irrigation or agriculture, but not presently used (Class IIB aquifer).

Brief Rationale for Selection: No supply wells in Area- Aquifer is a sole-source aquifer with drinking water capabilities -

Activity Name CALVERTON NY NPRO

Site Name: SITE 00001

Groundwater Category: Med
(High, Medium, Low)

Surface Water Eco Fresh

**CONTAMINANT
HAZARD
FACTOR (1)
(CHF)**

Contaminant	Maximum Conc. ug/L	Standard ug/L	Ratio (2)
Iron	1,470.0	1,000.0	1.470
Cadmium and compounds	0.2	1.1	0.180
Toluene	1.0	0.0	0.000
DDD,4,4-	0.02	0.0	0.000
Total:			1.652

(1) Evaluate for human contaminants only
 (2) Ratio = Maximum Concentration/Standard
 Note: Only top ten contaminants are displayed.

(Place an "X" next to one below)

Significant (If Total > 100): _____

Moderate (If Total 2 - 100): _____

Minimal (If Total < 2): X

**MIGRATION
PATHWAY
FACTOR
(MPF)**

Evident -

Analytical data or observable evidence indicates that contamination in the media is present at, is moving toward, or has moved to a point of exposure

Confined - Information indicates a low potential for contamination to a potential point of exposure (could be due to the presence of geological structures or physical controls)

(Place an "X" next to one below)

Evident: _____

Potential -

Possibility for contamination to be present at or migrate to a point of exposure; or information is not sufficient to make a determination of Evident or Confined

Potential: _____

Confined: X

Brief Rationale for Selection: Minor occurrences of inorganics detected.

**RECEPTOR
FACTOR
(RF)**

Identified -

Receptors identified that have access to surface water

Limited - Little or no potential for receptors to have access to surface water

(Place an "X" next to one below)

Identified: _____

Potential -

Potential for receptors to have access to surface water

Potential: X

Limited: _____

Brief Rationale for Selection: There is a potential for receptors to have access to surface water.

Activity Name CALVERTON NY NPRO

Site Name: SITE 00001

Surface Water Fresh Category: Low
 (High, Medium, Low)

Sediment Eco Fresh

CONTAMINANT
HAZARD
FACTOR (1)
(CHF)

Contaminant	Maximum Conc. ug/L	Standard mg/Kg	Ratio (2)
DDE	0.38	0.005	76.000
Arochlor 1248	0.38	0.03	12.670
Dieldrin	0.0044	0.002	2.200
Aldrin	0.0053	0.003	1.770
HCH (beta)	0.0024	0.005	0.480
beta-Pyrene	0.2	0.49	0.410
Benz(a)anthracene	0.075	0.32	0.230
Fluoranthene	0.14	0.75	0.190
Benzo[a]pyrene	0.066	0.37	0.180
Phenanthrene	0.099	0.56	0.180
Total:			94.303

(1) Evaluate for human contaminants only
 (2) Ratio = Maximum Concentration/Standard
 Note: Only top ten contaminants are displayed.

(Place an "X" next to one below)

Significant (If Total > 100): _____

Moderate (If Total 2 - 100): X

Minimal (If Total < 2): _____

MIGRATION
PATHWAY
FACTOR
(MPF)

Evident - Analytical data or observable evidence indicates that contamination in the media is present at, is moving toward, or has moved to a point of exposure

Potential - Possibility for contamination to be present at or migrate to a point of exposure; or information is not sufficient to make a determination of Evident or Confined

Confined - Information indicates a low potential for contamination to a potential point of exposure (could be due to the presence of geological structures or or physical controls)

(Place an "X" next to one below)

Evident: _____

Potential: X

Confined: _____

Brief Rationale for Selection: Chemicals in the landfill material are continuing to erode into the NE Pond and will potentially continue to impact ecological receptors.

RECEPTOR
FACTOR
(RF)

Identified - Receptors identified that have access to sediment

Potential - Potential for receptors to have access to sediment

Limited - Little or no potential for receptors to have access to sediment

(Place an "X" next to one below)

Identified: X

Potential: _____

Limited: _____

Brief Rationale for Selection: Tiger Salamendar identified as receptors.

Activity Name CALVERTON NY NPROSite Name: SITE 00001Sediment Fresh Category: High
(High, Medium, Low)

Soil

CONTAMINANT
HAZARD
FACTOR (1)
(CHF)

Contaminant	Maximum Conc. mg/Kg	Standard mg/Kg	Ratio (2)
Cadmium and compounds	2.1	38.0	0.060
Lead	19.9	400.0	0.050
Copper and compounds	104.0	2,800.0	0.040
Chromium (total)	31.3	3,000.0	0.010
Zinc	139.0	23,000.0	0.010
Chrysene	0.081	24.0	0.000
Benz[a]anthracene	0.067	61.0	0.000
Dichloroethane, 1,2- (EDC)	0.004	44.0	0.000
Butyl benzyl phthalate	1.0	13,000.0	0.000
Pyrene	0.13	2,000.0	0.000
Total:			0.163

(1) Evaluate for human contaminants only

(2) Ratio = Maximum Concentration/Standard

Note: Only top ten contaminants are displayed.

(Place an "X" next to one below)

Significant (If Total > 100): _____

Moderate (If Total 2 - 100): _____

Minimal (If Total < 2): _____ X

MIGRATION
PATHWAY
FACTOR
(MPF)

Evident -

Analytical data or observable evidence indicates that contamination is present at, is moving towards, or has moved to a point of exposure

Confined - Low possibility for contamination to be present at or migrate to a point of exposure

(Place an "X" next to one below)

Evident: _____

Potential: _____ X

Confined: _____

Potential -

Possibility for contamination to be present at or migrate to a point of exposure; or information is not sufficient to make a determination of Evident or Confined

Brief Rationale for Selection: Minimal contamination present. Insufficient evidence to support evident or confined.

RECEPTOR
FACTOR
(RF)

Identified -

Receptors identified that have access to contaminated soil

Limited - Little or no potential for receptors to have access to contaminated soil

(Place an "X" next to one below)

Identified: _____

Potential: _____ X

Limited: _____

Potential -

Potential for receptors to have access to contaminated soil

Brief Rationale for Selection: Site access not restricted. Potential exist for direct contact exposure.

Activity Name CALVERTON NY NPROSite Name: SITE 00001Soil Category: Low
(High, Medium, Low)

RELATIVE RISK EVALUATION WORKSHEET

SITE (1) BACKGROUND INFORMATION

Installation/Site Name for FUDS BETHPAGE NY NWIRP

Date Entered (Day, Month, Year): 10/21/97

Location (State): NY

Media Evaluated (GW, SW, Sediment, Soil): GW SWH SWEF SEDH SOIL

Site (Name/RMIS ID) / Project for FUDS: SITE 00002

Phase of Exec. (SI, RI, FS, Remv, RD/RA, or equiv. RCRA Stage): NFA

RMIS Site Type: SURFACE IMPOUNDMENT/LAGOON

Agr. Status (Y/N, If yes, type of agreement e.g., FFA, Permit, Order) Yes

Point of Contact (Name/Phone): AL TAORMINA

National Priority List (Y/N): No Site Rank: Low

SITE SUMMARY

(Include only key elements of information used to conduct the relative risk site evaluation. Attach map view of site if desired.)

Brief Site Description (Include site type, materials disposed of, dates of operation, and other relevant information):

Surface water drainage on Long Island is, for the most part, locally controlled, with numerous recharge basins used to channel this resource back to the ground water. These basins also receive storm water run off. Several such recharge basins are located at NWIRP Bethpage. Also, adjacent to the recharge basins are the former sludge drying beds. Sludge from the Plant No. 2 Industrial Waste Treatment Facility (south Grumman Complex) was dewatered in the drying beds before off site disposal. Site 2 occupies an area of approximately 16 acres, including the recharge basins and former sludge drying beds.

Brief Description of Pathways (Groundwater, Surface Water, Sediment, Soil):

Pathways to be considered at Site 2 include off site ground water as well as on site surface water/sediment, and surface and subsurface soils. The pathway for the off site groundwater is through the down gradient public wells. For the on site surface water/sediment, the pathway is through direct dermal contact. For the on site surface and subsurface soils, the pathways are through direct dermal contact and inhalation of fugitive dust.

Brief Description of Receptors (Human and Ecological):

Receptors to be considered at Site 2 include on site workers and off site residents.

(1) Use to record information on Sites and Areas of Concern (AOC) for Relative Risk Site Evaluation. The term Site is defined as a discrete area for which suspected contamination has been verified and req A Site by definition has been, or will be, entered into RMIS. For the FUDS Program, "projects" equates to sites for current installations. An AOC is a discrete area of contamination, or suspected contaminati (or RFA) phase that has not been entered into RMIS.

Ground Water

CONTAMINANT HAZARD FACTOR (1) (CHF)

Contaminant	Maximum Conc. ug/L	Standard ug/L	Ratio (2)
Lead	3.6	4.0	0.900
Manganese and compounds	63.1	180.0	0.350
Cadmium and compounds	1.8	18.0	0.100
Vanadium	23.6	260.0	0.090
Chromium (total)	13.8	180.0	0.080
Tetrachloroethylene (PCE)	6.0	110.0	0.050
Aluminum	1,860.0	37,000.0	0.050
Trichloroethylene (TCE)	6.0	160.0	0.040
Barium and compounds	52.2	2,600.0	0.020
Toluene	10.0	720.0	0.010
Total:			1.721

(1) Evaluate for human contaminants only
(2) Ratio = Maximum Concentration/Standard
Note: Only top ten contaminants are displayed.

(Place an "X" next to one below)

Significant (If Total > 100): _____

Moderate (If Total 2 - 100): _____

Minimal (If Total < 2): X

MIGRATION PATHWAY FACTOR (MPF)

Evident - Analytical data or observable evidence indicates that contamination in the media is moving away from the source.

Potential - Possibility for contamination to be present at or migrate to a point of exposure; or information is not sufficient to make a determination of Evident or Confined

Confined - Information indicates that the potential for contaminant migration from the source is limited (due to geological structures or physical controls)

(Place an "X" next to one below)

Evident: X

Potential: _____

Confined: _____

Brief Rationale for Selection: Analytical data indicates that contamination in the groundwater is moving or has moved away from the source area.

RECEPTOR FACTOR (RF)

Identified - There is a threatened or potentially threatened water supply downgradient of the source. The GW (cont. or not) is a current drinking water source or is equiv. to (Class I or IIA aquifer).

Potential - There is no potentially threatened water supply well downgradient of the source. The groundwater is potentially usable for DW, irrigation or agriculture, but not presently used (Class IIB aquifer).

Limited - There is no potentially threatened water supply well downgradient of the source. The groundwater is not considered a potential source of DW or is of limited beneficial use (IIIA, IIIB or perched aquifer).

(Place an "X" next to one below)

Identified: _____

Potential: _____

Limited: X

Brief Rationale for Selection: There is a water supply well downgradient of the source that has treatment installed for any extracted groundwater.

Activity Name BETHPAGE NY NWIRP

Site Name: SITE 00002

Groundwater Category: Low
(High, Medium, Low)

Surface Water Human

CONTAMINANT HAZARD FACTOR (1) (CHF)

Contaminant	Maximum Conc. ug/L	Standard ug/L	Ratio (2)
Tetrachloroethane, 1,1,2,2-	3.0	5.5	0.550
Trichloroethylene (TCE)	35.0	160.0	0.220
Dichloroethylene, 1,1-	1.0	4.6	0.220
Copper and compounds	99.2	1,400.0	0.070
Manganese and compounds	6.2	180.0	0.030
Trichloroethane, 1,1,1-	6.0	1,300.0	0.000
Barium and compounds	10.6	2,600.0	0.000
Zinc	31.0	11,000.0	0.000
Calcium	0.0	11,000.0	0.000
Total:			1.098

(1) Evaluate for human contaminants only
(2) Ratio = Maximum Concentration/Standard
Note: Only top ten contaminants are displayed.

(Place an "X" next to one below)

Significant (If Total > 100): _____

Moderate (If Total 2 - 100): _____

Minimal (If Total < 2): X

MIGRATION PATHWAY FACTOR (MPF)

Evident - Analytical data or observable evidence indicates that contamination in the media is present at, is moving toward, or has moved to a point of exposure

Potential - Possibility for contamination to be present at or migrate to a point of exposure; or information is not sufficient to make a determination of Evident or Confined

Confined - Information indicates a low potential for contamination to a potential point of exposure (could be due to the presence of geological structures or physical controls)

(Place an "X" next to one below)

Evident: _____

Potential: X

Confined: _____

Brief Rationale for Selection: Low-level VOC's detected in surface water/sediment. This water will recharge into the ground water aquifer.

RECEPTOR FACTOR (RF)

Identified - Receptors identified that have access to surface water

Potential - Potential for receptors to have access to surface water

Limited - Little or no potential for receptors to have access to surface water

(Place an "X" next to one below)

Identified: _____

Potential: _____

Limited: X

Brief Rationale for Selection: Ground water flows to the south towards public water supply wells which has treatment installed at the extraction point.

Activity Name BETHPAGE NY NWIRP

Site Name: SITE 00002

Surface Water Human Category: Low
(High, Medium, Low)

Surface Water Eco Fresh

CONTAMINANT HAZARD FACTOR (1) (CHF)

Contaminant	Maximum Conc. ug/L	Standard ug/L	Ratio (2)
Copper and compounds	99.2	12.0	8.270
Zinc	31.0	110.0	0.280
Trichloroethylene (TCE)	35.0	21,900.0	0.000
Tetrachloroethane, 1,1,2,2-	3.0	2,400.0	0.000
Trichloroethane, 1,1,1-	6.0	0.0	0.000
Manganese and compounds	6.2	0.0	0.000
Dichloroethylene, 1,1-	1.0	0.0	0.000
Calcium	0.0	110.0	0.000
Barium and compounds	10.6	0.0	0.000
Total:			8.551

(1) Evaluate for human contaminants only
(2) Ratio = Maximum Concentration/Standard
Note: Only top ten contaminants are displayed.

(Place an "X" next to one below)

Significant (If Total > 100): _____

Moderate (If Total 2 - 100): X

Minimal (If Total < 2): _____

MIGRATION PATHWAY FACTOR (MPF)

Evident -

Analytical data or observable evidence indicates that contamination in the media is present at, is moving toward, or has moved to a point of exposure

Confined -

Information indicates a low potential for contamination to a potential point of exposure (could be due to the presence of geological structures or physical controls)

(Place an "X" next to one below)

Evident: _____

Potential: X

Confined: _____

Potential -

Possibility for contamination to be present at or migrate to a point of exposure; or information is not sufficient to make a determination of Evident or Confined

Brief Rationale for Selection: Low-level VOC's detected in surface water/sediment. This water will recharge into the ground water aquifer.

RECEPTOR FACTOR (RF)

Identified -

Receptors identified that have access to surface water

Limited -

Little or no potential for receptors to have access to surface water

(Place an "X" next to one below)

Identified: _____

Potential: _____

Limited: X

Potential -

Potential for receptors to have access to surface water

Brief Rationale for Selection: The ground water aquifer which is used for drinking water has treatment installed at the point of extraction.

Activity Name BETHPAGE NY NWIRP

Site Name: SITE 00002

Surface Water Fresh Category: Low
(High, Medium, Low)

Sediment Human

**CONTAMINANT
HAZARD
FACTOR (1)
(CHF)**

Contaminant	Maximum Conc. mg/Kg	Standard mg/Kg	Ratio (2)
Aroclor-1248	2.6	0.0	0.370
Manganese and compounds	74.7	380.0	0.200
Arsenic (cancer endpoint)	2.8	22.0	0.130
Copper and compounds	89.9	2,800.0	0.030
Benzo[a]pyrene	0.118	6.1	0.020
Lead	5.78	400.0	0.010
Calcium	165.5	23,000.0	0.010
Chromium (total)	18.0	3,000.0	0.010
Chrysene	0.125	24.0	0.010
Dieldrin	0.008	2.8	0.000
Total:			0.792

(1) Evaluate for human contaminants only
(2) Ratio = Maximum Concentration/Standard
Note: Only top ten contaminants are displayed.

(Place an "X" next to one below)

Significant (If Total > 100): _____

Moderate (If Total 2 - 100): _____

Minimal (If Total < 2): X

**MIGRATION
PATHWAY
FACTOR
(MPF)**

Evident - Analytical data or observable evidence indicates that contamination in the media is present at, is moving toward, or has moved to a point of exposure

Potential - Possibility for contamination to be present at or migrate to a point of exposure; or information is not sufficient to make a determination of Evident or Confined

Confined - Information indicates a low potential for contamination to a potential point of exposure (could be due to the presence of geological structures or or physical controls)

(Place an "X" next to one below)

Evident: X

Potential: _____

Confined: _____

Brief Rationale for Selection: Analytical data indicates that contamination is present and moving toward a point of exposure.

**RECEPTOR
FACTOR
(RF)**

Identified - Receptors identified that have access to sediment

Potential - Potential for receptors to have access to sediment

Limited - Little or no potential for receptors to have access to sediment

(Place an "X" next to one below)

Identified: _____

Potential: _____

Limited: X

Brief Rationale for Selection: Receptor is limited because it is unlikely that human population will come in contact with sediments at the site.

Activity Name BETHPAGE NY NWIRP

Site Name: SITE 00002

Sediment Human Category: Low
(High, Medium, Low)

Soil

CONTAMINANT HAZARD FACTOR (1) (CHF)

Contaminant	Maximum Conc. mg/Kg	Standard mg/Kg	Ratio (2)
Arsenic (cancer endpoint)	10.45	22.0	0.470
Aluminum	19,500.0	77,000.0	0.250
Benzo[a]pyrene	1.2	6.1	0.200
Vanadium	87.7	540.0	0.160
Chromium (total)	419.0	3,000.0	0.140
Beryllium and compounds	0.88	14.0	0.060
Dibenz[ah]anthracene	0.31	6.1	0.050
Chrysene	1.1	24.0	0.050
Cobalt	15.2	380.0	0.040
Anthracene	0.76	19.0	0.040
Total:			1.598

(1) Evaluate for human contaminants only
(2) Ratio = Maximum Concentration/Standard
Note: Only top ten contaminants are displayed.

(Place an "X" next to one below)

Significant (If Total > 100): _____

Moderate (If Total 2 - 100): _____

Minimal (If Total < 2): X

MIGRATION PATHWAY FACTOR (MPF)

Evident - Analytical data or observable evidence indicates that contamination is present at, is moving towards, or has moved to a point of exposure

Potential - Possibility for contamination to be present at or migrate to a point of exposure; or information is not sufficient to make a determination of Evident or Confined

Confined - Low possibility for contamination to be present at or migrate to a point of exposure

(Place an "X" next to one below)

Evident: _____

Potential: X

Confined: _____

Brief Rationale for Selection: 7.239 tons of soil were removed from the site. After excavation, sampling results indicate acceptable regulatory levels of remaining PCB concentrations.

RECEPTOR FACTOR (RF)

Identified - Receptors identified that have access to contaminated soil

Potential - Potential for receptors to have access to contaminated soil

Limited - Little or no potential for receptors to have access to contaminated soil

(Place an "X" next to one below)

Identified: _____

Potential: _____

Limited: X

Brief Rationale for Selection: Due to soil excavation, a receptor factor for PCB is non-existent.

Activity Name BETHPAGE NY NWIRP

Site Name: SITE 00002

Soil Category: Low
(High, Medium, Low)

RELATIVE RISK EVALUATION WORKSHEET

SITE (1) BACKGROUND INFORMATION

Installation/Site Name for FUDS CALVERTON NY NPRO

Date Entered (Day, Month, Year): 7/31/98

Location (State): NY

Media Evaluated (GW, SW, Sediment, Soil): GW SOIL

Site (Name/RMIS ID) / Project for FUDS: SITE 00006

Phase of Exec. (SI, RI, FS, Remv, RD/RA, or equiv. RCRA Stage): CMS

RMIS Site Type: SPILL SITE AREA

Aggr. Status (Y/N, If yes, type of agreement e.g., FFA, Permit, Order) Yes

Point of Contact (Name/Phone): JIM COLTER

National Priority List (Y/N): No Site Rank: High

SITE SUMMARY

(Include only key elements of information used to conduct the relative risk site evaluation. Attach map view of site if desired.)

Brief Site Description (Include site type, materials disposed of, dates of operation, and other relevant information):

The fuel calibration area is located approximately 2,000 feet north of River Road and 2,000 feet west of the south gate. The fuel calibration area consists of a concrete pad which is roughly 250 feet wide by 250 feet long. The new Fuel Calibration Facility is currently located on the eastern edge of the concrete pad. The southern edge of the pad was formerly used for the same activity. An open field, approximately 10 acres in size, is located immediately south of the pad and is included as part of site 6A. This site was used for the testing of aircraft fuel and engine systems which resulted in frequent but small fuel spills.

Brief Description of Pathways (Groundwater, Surface Water, Sediment, Soil):

Pathways to be considered at Site 6A include surface and subsurface soils. For the on site surface and subsurface soils, the pathways are through direct dermal contact. Another pathway to consider is through future use of the on site groundwater.

Brief Description of Receptors (Human and Ecological):

Receptors to be considered at Site 6A include on site workers and future residents.

(1) Use to record information on Sites and Areas of Concern (AOC) for Relative Risk Site Evaluation. The term Site is defined as a discrete area for which suspected contamination has been verified and req A Site by definition has been, or will be, entered into RMIS. For the FUDS Program, "projects" equates to sites for current installations. An AOC is a discrete area of contamination, or suspected contaminati (or RFA) phase that has not been entered into RMIS.

Ground Water

CONTAMINANT HAZARD FACTOR (1) (CHF)

Contaminant	Maximum Conc. ug/L	Standard ug/L	Ratio (2)
Lead	1,740.0	4.0	435.000
Methylnaphthalene, 2-	7,500.0	0.0	41.670
Naphthalene	2,800.0	240.0	11.670
Ethyl chloride (Chloroethane)	2,600.0	710.0	3.660
Dichloroethane, 1,1-	300.0	810.0	0.370
Xylene (mixed)	450.0	1,400.0	0.320
Toluene	140.0	720.0	0.190
Benzene	4.0	39.0	0.100
Trichloroethane, 1,1,1-	23.0	1,300.0	0.020
Dichlorobenzene, 1,2-	3.0	370.0	0.010
Total:			493.016

(1) Evaluate for human contaminants only
(2) Ratio = Maximum Concentration/Standard
Note: Only top ten contaminants are displayed.

(Place an "X" next to one below)

Significant (If Total > 100): X

Moderate (If Total 2 - 100):

Minimal (If Total < 2):

MIGRATION PATHWAY FACTOR (MPF)

Evident - Analytical data or observable evidence indicates that contamination in the media is moving away from the source.

Confined - Information indicates that the potential for contaminant migration from the source is limited (due to geological structures or physical controls)

(Place an "X" next to one below)

Evident: X

Potential:

Confined:

Potential - Possibility for contamination to be present at or migrate to a point of exposure; or information is not sufficient to make a determination of Evident or Confined

Brief Rationale for Selection: Ground water contamination confirmed down gradient of source.

RECEPTOR FACTOR (RF)

Identified - There is a threatened or potentially threatened water supply downgradient of the source. The GW (cont. or not) is a current drinking water source or is equiv. to (Class I or IIA aquifer).

Limited - There is no potentially threatened water supply well downgradient of the source. The groundwater is not considered a potential source of DW or is of limited beneficial use (IIIA, IIIB or perched aquifer).

(Place an "X" next to one below)

Identified:

Potential: X

Limited:

Potential - There is no potentially threatened water supply well downgradient of the source. The groundwater is potentially usable for DW, irrigation or agriculture, but not presently used (Class IIB aquifer).

Brief Rationale for Selection: Aquifer is a sole source aquifer with drinking water capabilities. However, GW at this site is not currently extracted for potable use.

Activity Name CALVERTON NY NPRO

Site Name: SITE 00006

Groundwater Category: High
(High, Medium, Low)

Soil

CONTAMINANT HAZARD FACTOR (1) (CHF)

Contaminant	Maximum Conc. mg/Kg	Standard mg/Kg	Ratio (2)
Lead	34.2	400.0	0.090
Benzo[a]pyrene	0.11	6.1	0.020
Chrysene	0.12	24.0	0.000
Benzo[b]fluoranthene	0.19	61.0	0.000
Indeno[1,2,3-cd]pyrene	0.085	61.0	0.000
Anthracene	0.02	19.0	0.000
Benzo[k]fluoranthene	0.12	610.0	0.000
Pyrene	0.25	2,000.0	0.000
Fluorene	0.025	300.0	0.000
Fluoranthene	0.21	2,600.0	0.000
Total:			0.115

(1) Evaluate for human contaminants only
(2) Ratio = Maximum Concentration/Standard
Note: Only top ten contaminants are displayed.

(Place an "X" next to one below)

Significant (If Total > 100):

Moderate (If Total 2 - 100):

Minimal (If Total < 2): X

MIGRATION PATHWAY FACTOR (MPF)

Evident - Analytical data or observable evidence indicates that contamination is present at, is moving towards, or has moved to a point of exposure

Potential - Possibility for contamination to be present at or migrate to a point of exposure; or information is not sufficient to make a determination of Evident or Confined

Confined - Low possibility for contamination to be present at or migrate to a point of exposure

(Place an "X" next to one below)

Evident:

Potential:

Confined: X

Brief Rationale for Selection: Various chemicals detected in soils but at relatively low concentrations. There is also a low potential for these chemicals to move to a point of exposure.

RECEPTOR FACTOR (RF)

Identified - Receptors identified that have access to contaminated soil

Potential - Potential for receptors to have access to contaminated soil

Limited - Little or no potential for receptors to have access to contaminated soil

(Place an "X" next to one below)

Identified:

Potential: X

Limited:

Brief Rationale for Selection: Future occupants of this area would have the potential to be exposed to the chemicals in site soils.

Activity Name CALVERTON NY NPRO

Site Name: SITE 00006

Soil Category: Low
(High, Medium, Low)

RELATIVE RISK EVALUATION WORKSHEET

SITE (1) BACKGROUND INFORMATION

Installation/Site Name for FUDS CALVERTON NY NPRO

Location (State): NY

Site (Name/RMIS ID) / Project for FUDS: SITE 00007

RMIS Site Type: SPILL SITE AREA

Point of Contact (Name/Phone): JIM COLTER

Date Entered (Day, Month, Year): 7/31/98

Media Evaluated (GW, SW, Sediment, Soil): GW SOIL

Phase of Exec. (SI, RI, FS, Remv, RD/RA, or equiv. RCRA Stage): CMS

Agr. Status (Y/N, If yes, type of agreement e.g., FFA, Permit, Order) Yes

National Priority List (Y/N): No Site Rank: High

SITE SUMMARY

(Include only key elements of information used to conduct the relative risk site evaluation. Attach map view of site if desired.)

Brief Site Description (Include site type, materials disposed of, dates of operation, and other relevant information):

The fuel depot is located approximately 3,000 feet north of the south gate and is roughly 2 acres in size. The fuel depot was used for the storage and distribution of fuel products, such as JP-4 and JP-5 jet fuel. Contamination due to these activities was the result of tank and pipe leaks, overfilling, and spills over the years, currently all UST and AST have been removed from the Fuel Depot in support of the eventual closure of the Calverton Facility.

Brief Description of Pathways (Groundwater, Surface Water, Sediment, Soil):

The main pathway to consider is through future use of the on site ground water.

Brief Description of Receptors (Human and Ecological):

Receptors to be considered at Site 7 include future on site workers and/or residents.

(1) Use to record information on Sites and Areas of Concern (AOC) for Relative Risk Site Evaluation. The term Site is defined as a discrete area for which suspected contamination has been verified and req A Site by definition has been, or will be, entered into RMIS. For the FUDS Program, "projects" equates to sites for current installations. An AOC is a discrete area of contamination, or suspected contaminati (or RFA) phase that has not been entered into RMIS.

Ground Water

CONTAMINANT HAZARD FACTOR (1) (CHF)

Contaminant	Maximum Conc. ug/L	Standard ug/L	Ratio (2)
Lead	692.0	4.0	173.000
Benzo[a]pyrene	10.0	0.92	10.870
Benzene	390.0	39.0	10.000
Benzo[b]fluoranthene	13.0	9.2	1.410
Benz[a]anthracene	9.0	9.2	0.980
Toluene	540.0	720.0	0.750
Xylene (mixed)	970.0	1,400.0	0.690
Naphthalene	110.0	240.0	0.460
Methylnaphthalene, 2-	77.0	0.0	0.430
Ethylbenzene	120.0	1,300.0	0.090
Total:			198.826

(1) Evaluate for human contaminants only
(2) Ratio = Maximum Concentration/Standard
Note: Only top ten contaminants are displayed.

(Place an "X" next to one below)

Significant (If Total > 100): X

Moderate (If Total 2 - 100):

Minimal (If Total < 2):

MIGRATION PATHWAY FACTOR (MPF)

Evident - Analytical data or observable evidence indicates that contamination in the media is moving away from the source.

Confined - Information indicates that the potential for contaminant migration from the source is limited (due to geological structures or physical controls)

(Place an "X" next to one below)

Evident: X

Potential - Possibility for contamination to be present at or migrate to a point of exposure; or information is not sufficient to make a determination of Evident or Confined

Potential:

Confined:

Brief Rationale for Selection: GW contamination confirmed down gradient of source indicating evident migration.

RECEPTOR FACTOR (RF)

Identified - There is a threatened or potentially threatened water supply downgradient of the source. The GW (cont. or not) is a current drinking water source or is equiv. to (Class I or IIA aquifer).

Limited - There is no potentially threatened water supply well downgradient of the source. The groundwater is not considered a potential source of DW or is of limited beneficial use (IIIA, IIIB or perched aquifer).

(Place an "X" next to one below)

Identified:

Potential - There is no potentially threatened water supply well downgradient of the source. The groundwater is potentially usable for DW, irrigation or agriculture, but not presently used (Class IIB aquifer).

Potential: X

Limited:

Brief Rationale for Selection: Aquifer is sole-source aquifer with drinking water capabilities. However, GW at this site - is not currently extracted for potable use.

Activity Name CALVERTON NY NPRO

Site Name: SITE 00007

Groundwater Category: High
(High, Medium, Low)

Soil

**CONTAMINANT
HAZARD
FACTOR (1)
(CHF)**

Contaminant	Maximum Conc. mg/Kg	Standard mg/Kg	Ratio (2)
Lead	8.9	400.0	0.020
Dichloroethane, 1,2- (EDC)	0.001	44.0	0.000
Total:			2.23E-02

(1) Evaluate for human contaminants only
 (2) Ratio = Maximum Concentration/Standard
 Note: Only top ten contaminants are displayed.

(Place an "X" next to one below)

Significant (If Total > 100): _____

Moderate (If Total 2 - 100): _____

Minimal (If Total < 2): X

**MIGRATION
PATHWAY
FACTOR
(MPF)**

Evident - Analytical data or observable evidence indicates that contamination is present at, is moving towards, or has moved to a point of exposure

Potential - Possibility for contamination to be present at or migrate to a point of exposure; or information is not sufficient to make a determination of Evident or Confined

Confined - Low possibility for contamination to be present at or migrate to a point of exposure

(Place an "X" next to one below)

Evident: _____

Potential: _____

Confined: X

Brief Rationale for Selection: Various chemicals detected in soils but at relatively low concentrations. There is also a low potential for these chemicals to move to a point of exposure.

**RECEPTOR
FACTOR
(RF)**

Identified - Receptors identified that have access to contaminated soil

Potential - Potential for receptors to have access to contaminated soil

Limited - Little or no potential for receptors to have access to contaminated soil

(Place an "X" next to one below)

Identified: _____

Potential: X

Limited: _____

Brief Rationale for Selection: Future occupants of this area would have the potential to be exposed to the chemicals in site soils.

Activity Name CALVERTON NY NPRO

Site Name: SITE 00007

Soil Category: Low
 (High, Medium, Low)

RELATIVE RISK EVALUATION WORKSHEET

SITE (1) BACKGROUND INFORMATION

Installation/Site Name for FUDS CALVERTON NY NPRO

Date Entered (Day, Month, Year): 7/31/98

Location (State): NY

Media Evaluated (GW, SW, Sediment, Soil): GW

Site (Name/RMIS ID) / Project for FUDS: SITE 00009

Phase of Exec. (SI, RI, FS, Remv, RD/RA, or equiv. RCRA Stage): RFA

RMIS Site Type: SPILL SITE AREA

Agr. Status (Y/N, If yes, type of agreement e.g., FFA, Permit, Order) Yes

Point of Contact (Name/Phone): JIM COLTER

National Priority List (Y/N): No Site Rank: Med

SITE SUMMARY

(Include only key elements of information used to conduct the relative risk site evaluation. Attach map view of site if desired.)

Brief Site Description (Include site type, materials disposed of, dates of operation, and other relevant information):

The ECM Area is located in the northeast corner of the facility and was used for the testing of electronic equipment. Chlorinated solvents were routinely used as cleaning agents at this area.

Brief Description of Pathways (Groundwater, Surface Water, Sediment, Soil):

The main pathway to consider is through future use of on-site groundwater.

Brief Description of Receptors (Human and Ecological):

Receptors to be considered at this site include future on-site workers and/or residents.

(1) Use to record information on Sites and Areas of Concern (AOC) for Relative Risk Site Evaluation. The term Site is defined as a discrete area for which suspected contamination has been verified and req A Site by definition has been, or will be, entered into RMIS. For the FUDS Program, "projects" equates to sites for current installations. An AOC is a discrete area of contamination, or suspected contaminati (or RFA) phase that has not been entered into RMIS.

Ground Water

**CONTAMINANT
HAZARD
FACTOR (1)
(CHF)**

Contaminant	Maximum Conc. ug/L	Standard ug/L	Ratio (2)
Dichloroethane, 1,2- (EDC)	15.0	12.0	1.250
Trichloroethane, 1,1,1-	35.0	1,300.0	0.030
Methylene chloride	8.0	430.0	0.020
Chloromethan	1.0	150.0	0.010
(1) Evaluate for human contaminants only (2) Ratio = Maximum Concentration/Standard			Total: 1.302

(1) Evaluate for human contaminants only
(2) Ratio = Maximum Concentration/Standard
Note: Only top ten contaminants are displayed.

Total:	1.302
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1.302

(Place an "X" next to one below)

Significant (If Total > 100):

Moderate (If Total 2 - 100):

Minimal (If Total < 2):

x

**MIGRATION
PATHWAY
FACTOR
(MPF)**

Evident -

Analytical data or observable evidence indicates that contamination in the media is moving away from the source.

Confined - Information indicates that the potential for contaminant migration from the source is limited (due to geological structures or physical controls)

(Place an "X" next to one below)

Evident: X

Potential -

Possibility for contamination to be present at or migrate to a point of exposure; or information is not sufficient to make a determination of Evident or Confined

Potential: _____

Confined: _____

Brief Rationale for Selection: Relatively low levels of VOCs detected in GW and also in downgradient wells indicating evident migration of chemicals. Horizontal extent of plume not yet delineated.

RECEPTOR
FACTOR
(RF) -

Identified -

There is a threatened or potentially threatened water supply downgradient of the source. The GW (cont. or not) is a current drinking water source or is equiv. to (Class I or IIA aquifer).

Limited - There is no potentially threatened water supply well downgradient of the source. The groundwater is not considered a potential source of DW or is of limited beneficial use (IIIA, IIIB or perched aquifer).

(Place an "X" next to one below)

Identified: _____

Potential: X

Limited: _____

Potential -

There is no potentially threatened water supply well downgradient of the source. The groundwater is potentially usable for DW, irrigation or agriculture, but not presently used (Class IIB aquifer).

Brief Rationale for Selection: Aquifer is a sole-source aquifer with drinking water capabilities. However, GW at this site is not currently extracted for potable use.

Activity Name CALVERTON NY NPRO

Site Name: SITE 00009

Groundwater Category: Med
(High, Medium, Low)

RELATIVE RISK EVALUATION WORKSHEET

SITE (1) BACKGROUND INFORMATION

Installation/Site Name for FUDS <u>CALVERTON NY NPRO</u>	Date Entered (Day, Month, Year): <u>7/31/98</u>
Location (State): <u>NY</u>	Media Evaluated (GW, SW, Sediment, Soil): <u>GW</u>
Site (Name/RMIS ID) / Project for FUDS: <u>SITE 00010</u>	Phase of Exec. (SI, RI, FS, Remv, RD/RA, or equiv. RCRA Stage): <u>RFA</u>
RMIS Site Type: <u>SPILL SITE AREA</u>	Agr. Status (Y/N, If yes, type of agreement e.g., FFA, Permit, Order) <u>Yes</u>
Point of Contact (Name/Phone): <u>JIM COLTER</u>	National Priority List (Y/N): <u>No</u> Site Rank: <u>Low</u>

SITE SUMMARY

(Include only key elements of information used to conduct the relative risk site evaluation. Attach map view of site if desired.)

Brief Site Description (Include site type, materials disposed of, dates of operation, and other relevant information):

There are approximately twenty-two cesspool/leach fields throughout the facility. Of those twenty-two areas it was determined that industrial chemicals, including solvents, were used in only eight areas. These eight areas are what make up Site 10. The cesspools are generally located adjacent to the building which they service. Due to the impending transfer of the facility, all of the cesspools were cleaned out and confirmation sampling conducted. Areas adjacent to two cesspools required further characterization for GW contamination. These areas are the Jet Fuel Systems Lab (Site 10A) and the Engine Test House (Site 10B).

Brief Description of Pathways (Groundwater, Surface Water, Sediment, Soil):

The main pathway to be consider is through future use of on-site groundwater.

Brief Description of Receptors (Human and Ecological):

Receptors to be considered include future on-site workers and/or residents.

(1) Use to record information on Sites and Areas of Concern (AOC) for Relative Risk Site Evaluation. The term Site is defined as a discrete area for which suspected contamination has been verified and req A Site by definition has been, or will be, entered into RMIS. For the FUDS Program, "projects" equates to sites for current installations. An AOC is a discrete area of contamination, or suspected contaminati (or RFA) phase that has not been entered into RMIS.

Ground Water

**CONTAMINANT
HAZARD
FACTOR (1)
(CHF)**

Contaminant	Maximum Conc. ug/L	Standard ug/L	Ratio (2)
Dichloroethane, 1,2- (EDC)	14.0	12.0	1.170
Xylene	900.0	1,400.0	0.640
Ethylbenzene	200.0	1,300.0	0.150
Methylene chloride	9.0	430.0	0.020
Methyl ethyl ketone	19.0	1,900.0	0.010
Total:			1.994

(1) Evaluate for human contaminants only
 (2) Ratio = Maximum Concentration/Standard
 Note: Only top ten contaminants are displayed.

(Place an "X" next to one below)

Significant (If Total > 100): _____

Moderate (If Total 2 - 100): _____

Minimal (If Total < 2): X

**MIGRATION
PATHWAY
FACTOR
(MPF)**

Evident - Analytical data or observable evidence indicates that contamination in the media is moving away from the source.

Confined - Information indicates that the potential for contaminant migration from the source is limited (due to geological structures or physical controls)

(Place an "X" next to one below)

Evident: _____

Potential: X

Confined: _____

Potential - Possibility for contamination to be present at or migrate to a point of exposure; or information is not sufficient to make a determination of Evident or Confined

Brief Rationale for Selection: The potential exists for the chemicals in the groundwater to migrate away from the source - area.

**RECEPTOR
FACTOR
(RF)**

Identified - There is a threatened or potentially threatened water supply downgradient of the source. The GW (cont. or not) is a current drinking water source or is equiv. to (Class I or IIA aquifer).

Limited - There is no potentially threatened water supply well downgradient of the source. The groundwater is not considered a potential source of DW or is of limited beneficial use (IIIA, IIIB or perched aquifer).

(Place an "X" next to one below)

Identified: _____

Potential: X

Limited: _____

Potential - There is no potentially threatened water supply well downgradient of the source. The groundwater is potentially usable for DW, irrigation or agriculture, but not presently used (Class IIB aquifer).

Brief Rationale for Selection: Aquifer is a sole-source aquifer with drinking water capabilities. However, GW at this site is not currently extracted for potable use.

Activity Name CALVERTON NY NPRO

Site Name: SITE 00010

Groundwater Category: Low
 (High, Medium, Low)

SENSITIVE RECORD

**PORTIONS OF THIS RECORD ARE CONSIDERED SENSITIVE AND ARE
NOT AVAILABLE FOR PUBLIC VIEWING**

THIS INFORMATION IS BEING WITHHELD BECAUSE IT CONTAINS AN:

ADDRESS OF A PRIVATE CITIZEN

FOR ADDITIONAL INFORMATION, CONTACT:

PUBLIC AFFAIRS OFFICER
NAVAL FACILITIES ENGINEERING COMMAND MID ATLANTIC
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