104-31

Tom Grosh
22 Aug 96

RADIOLOGICAL INVESTIGATIONS MEETING AGENDA

August 22, 1996
Seneca Army Depot Activity, NY

8:30 - 8:45	Introduction / Board Bus
9:00 - 10:30	Site History / Site Tour
10:30- 10:45	Return to NCO Club
10:45 - 11:00	Purpose of Investigations
11:00 - 12:00	Applicable Regulations
12:00 - 12:45	Lunch
12:45 - 1:45	Discussion Affected Areas vs. Unaffected Areas Interior and Exterior Data Collection Background Levels
1:45 - 2:00	Conclusions

ATTENDEE LIST FOR RADIOLOGICAL INVESTIGATIONS MEETING

NAME	AGENCY
Stephen M. Absolom	Seneca Army Depot Activity
Thomas Enroth	Seneca Army Depot Activity
Mike Lewis 1100 hrs	Seneca Army Depot Activity
Thomas Stincic	Seneca Army Depot Activity
Thomas Reynolds	Seneca Army Depot Activity
Keith Hoddinott	U.S. Army Center for Health Promotion and Preventive Medicine
Randall Battaglia	NYD Corps of Engineers
Dorothy Richards	HND Corps of Engineers
Luke McCormick	MRD Corps of Engineers
Carla Struble	U.S. Environmental Protection Agency
Bruce Nelson	Malcolm Pirnie
Adela Salame'Alfie	NYS Dept. of Health
Bob Alibozek	NYS Dept. of Health
Gary Baker	NYS Dept. of Health
Dan Geraghty	NYS Dept. of Health
Kamal Gupta	NYS Dept. of Env. Conservation
~~John~~ Jack Kadlecek	NYS Dept. of Env. Conservation
Tim Rice	NYS Dept. of Env. Conservation
Andrew Schwartz	Parsons Engineering Science, Inc
Eliza Schantz	Parsons Engineering Science, Inc
Robert Scott	NYSDEC
Karen Odgen	12 MI

SEAD 12 #63
RI/FS

Bldg. 803

U235, U238, Pu239, H3, Ra226, Co60, Co57

Bldg. 804

U235, U238, Pu239, H3, Ra226 (sealed & unsealed sources)
Solvents
Lead-based paints
Chromate-based paints

Bldg. 806
Sealed check sources Cesium, thorium, uranium, Americium : All sealed sources w/ leak checks
Lead / heavy metals
Acid
Solvents

Bldg.810

Lead/ heavy metals
Solvents
U238, H3, Ra226, Co60 (sealed & unsealed sources) — inside container
Lead-based paints → U 238
Chromate-based paints

Bldg. 812

Ra226, Pm145, H3 (sealed sources)
Solvents
POLs

Bldg. 813

Lead-based paints
Chromate-based paints
Solvents

Bldg. 814

Solvents
POLs
Lead-based paints
Chromate-based paints
Acids
Heavy metals

Bldg. 815 & 816

U235, U238, Pu239, H3, Co60, Pm147, Ra226 (sealed & unsealed sources)
Solvents
Heavy metals
Acid
Asbestos
Lead-based paints
Chromate-based paints

Bldg. 817

Lead-based paints
Chromate-based paints

Bldg. 819

Di-isocynates (foam project)
Heavy metals
Acid
Lead-based paints
Chromate-based paints
Solvents
Asbestos
Ra226, U235, U238, Co60, Pu239, H3 (sealed & unsealed sources)

Miscellaneous

Fence line--herbicide

note Bldg 321 - sealed check sources

The following is a listing of known solvents, activators, adhesives,primers,paints, greases, etc. that were used in Q-area buildings: E13, 615/516 & 519, 517

Acetone, technical, O-A-51F
Activator MIL-S-22473, Grade T and N
Adhesive, P/N 815809-00W
Adhesive MMM-A-121
Adhesive, Contact MIL-A-21366
Adhesive (Eastman 910) MIL-A-46050,Type 1, Class 2
Adhesive, MMM-A-130, Type 1
Adhesive, MMM-A-181, Type I, Grade A
Adhesive, MMM-A-250, Type II
Adhesive, MMM-A-1617, Type II
Adhesive, MMM-A-1617, Type III
Adhesive, P/N 879451-00W
Adhesive, P/N 871440-00W
Adhesive, Epoxy Resin, P/N 829756-00W
Adhesive, Epoxy Resin, P/N 834412-00
Adhesive, Silicone RTV 732, P/N 878266-00W
Adhesive, Silicone RTV 162, P/N 880389-00
Adhesive, Silicone,DC-281 w/catalyst P/N 876415-00
Alcohol, Denatured
Alcohol, Isopropyl, Technical
Antiseize Compound, DOD-L-25681
Antiseize Compound, MIL-T-22361
Calcium Sulphate, Technical Grade C138
Chromium Trioxide, Technical O-C-303
Coating Compound, MIL-C-81706, Class 1A, Form II or III, Method B
Coating Compound, Bituminous, Emulsion Type, P/N 875754-00W
Coating Compound, Epoxy Resin, P/N 837994-0W
Coating Compound, Fluorescent, MIL-P-21600
Coating Compound, Metal Pretreatment, DOD-P-15328
Coating Compound, Polyurethane, P/N 872243-00W
Coating Compound, Polyurethane, P/N 877551-00W
Coating Compound, Polyurethane, P/N 872242-00W
Coating Compound, Polyurethane, MIL-C-83286
Coating Kit, Epoxy-Polyamide, MIL-C-22750, Type I
Coating Kit, P/N 870215-00W
Compound, Silicone, RTV 3145
Corrosion Preventive, Solvent Cutback, MIL-C-81309, Grade I
Corrosion Preventive, Water-displacing,MIL-C-81309,Type II, Class2
Dye, Layout P/N 871173-00
Enamel, Lusterless TT-E-00488
Enamel, MIL-E-16663
Enamel Gloss TT-E-489, Class A

Enamel, Semigloss, MIL-E-15090, Type II, Class 2
Enamel, Lusterless, TT-E-515
Enamel, Semigloss, TT-E-529, Class A
Enamel, TT-E-485, Type II
Filler, Dent, Metal MIL-F-52252
Filler, Plastic, TTT-F-340
Grease, Aircraft, MIL-G-23827
Grease, Fluorinated, P/N 329390-00W
Grease, Ground Glass, P/N 831476-00
Grease, Ground Glass, P/N 877806-00
Grease, Industrial, GP, DOD-G-24508
Grease, Molybdenum Disulfide, MIL-G-21164
Grease, Polyglycol, P/N 871603-00W
Grease, MIL-G-4343
Hydraulic Fluid, MIL-H-5606
Ink, Stencil, A-A-208, Type I, II, and III
Insulating Compound, Electrical, MIL-S-8660
Insulating Compound, Electrical, MIL-E-22118
Lacquer, A-A-665A
Lacquer, TT-L-32
Lacquer, TT-L-20
Lacquer, TT-L-58
Lubricant, Dry Film, MIL-L-23398, Type I
Lubricant, Solid Film, P/N 875942-00W
Lubricating Oil, MIL-L-15019
Lubricating Oil, GP, MIL-L-3150
Methanol, ACS, O-M-232, Grade A
Methyl Ethyl Ketone, Technical, TT-M-261
Methyl Isobutyl Ketone, ASTM-D1153
Molybdenum Disulfide, Technical, P/N 871432-00W
Naptha, Aliphatic, TT-N-95, type II
Oil, Duo-Seal, MIL-L-83767
Paint, Stencil, A-A-1558, Type I
Pigment, Aluminum, TT-P-320, Type II, Class A
Primer Coating, Epoxy-Polyamide, MIL-P-23377, Type I
Primer Coating, TT-P-1757
Primer Coating, TT-P-636
Primer Coating, MIL-P-15930
Putty (zinc chromate) MIL-P-8116
Remover, Paint TT-R-251, Type III, Class A
Sealant, Base Compound, RTV 630A w/catalyst RTV 630B
Sealing Compound, MIL-S-8802, Classes A-2, B-2, B-1/2
Sealing Compound, MIL-S-22473, Grades A,B,C,E,H,CV, CVV,CW,EV,HV
Sealing Compound, MIL-S-46163, Type II, Grade M
Sealing Compound, MIL-S-46163, Type I, Grade K

Silicone Fluid, Dimethyl Polysiloxane, VV-D-1078
Solvent, Dry Cleaning, A-A-711
Tetrahydrofuran, Technical Grade 9450
Thinner, Aliphatic, MIL-T-81772
Thinner, Dope and Lacquer, A-A-857
Thinner, Paint, Mineral Spirits, TT-T-291, Type I
Thinner, Epoxy Coating, P/N 876934-00W
Thinner, Synthetic Enamel, TT-E-306, Type 2
Toluene, Technical, TT-T-548
Trichloroethane, Technical, O-T-620
Trichloroethylene, Technical, O-T-634, Type I
Tetrachloroethylene, O-T-236
Trichlorotrifluoroethane, MIL-C-81302, Type I and Type II
Varnish, Insulating, MIL-I-24092, Grade CB, Class 155
Varnish, TT-V-119
Xylene, Technical, ASTM-D846

NSNs are available for the majority of the above listed items in TM 39-35-51A

Radiological Investigation Information Sheet
at Seneca Army Depot Activity
August 22, 1996

The intent of this information sheet is to identify recent developments regarding the status of the radiological sites at the Seneca Army Depot Activity (SEDA). There are three (3) radiological sites : SEAD-12, the radiological burial disposal pits, SEAD-48, the pitchblende ore storage igloos, and SEAD-63, the miscellaneous component burial site. These three sites, SEADs 12, 48, and 63, were combined as an operable unit (OU) in order to consolidate the investigative efforts by preparing one project scoping plan that will cover all radiological issues. Preparing site specific project scoping plans, with references made to the site-wide generic workplan, was determined as the most effective way of expediting the process of workplan review. The generic workplan contains information that applies site-wide. Project scoping plans are streamlined workplans that focus only on site specific issues. Initially, Parsons ES prepared pre-draft scoping plans for each site. Pre-draft scoping plans are intended for Army review only. The pre-draft scoping plan for SEAD-12 was submitted on August 11,1995. The pre-draft scoping plan for SEAD-48 was submitted on August 12, 1995 and the pre-draft scoping plan for SEAD-63 was submitted on September 9, 1995. Following receipt and incorporation of all Army comments, Parsons ES combined these pre-draft scoping plans into a single radiological OU draft document which was submitted to EPA and NYSDEC on December 19, 1995. This OU document is referred to as the SEAD 12, 48, and 63 Project Scoping Plan. Comments from EPA, dated July 2, 1996, were received on July 9, 1996. Comments from NYSDEC, dated June 20, 1996, were received on July 1, 1996.

Upon review of the EPA and NYSDEC comments, it is apparent that changes to the draft scoping plan will be required. The most significant comments pertaining to radiological issues were received from NYSDEC. The intent of this information sheet is to identify these issues and begin the process of obtaining consensus among the parties involved to resolve regulatory comments.

In addition, during our recent Bottom Up Review (BUR) meeting at SEDA on July 31 and August 1, 1996, the Army released additional information pertaining to SEAD-12, including the types of radioactive isotopes that were associated with specific buildings in the special weapons area. Previously, none of this information was available. However, with SEDA being closed, this new information has been provided and will need to be incorporated into the revised scoping plan for SEAD-12. This disclosure of the types of materials that were used in the various buildings within the high security area will result in reclassifying as Affected several of the buildings that had previously been classified as Unaffected.

Summarized below are the premises that were used by Parsons ES in writing the project scoping plan. Following these summaries, three alternatives are discussed which address the options that can be taken to respond to the comments on that plan.

The SEAD 12, 48, and 63 project scoping plan was written to propose remedial investigations that would meet two objectives:

1. Collect characterization data for areas where releases are currently impacting site media. This data would be used to characterize the nature and extent of these impacts, as well as provide sufficient data to perform a baseline risk assessment for those areas.
2. Collect "final release" survey data, following NUREG 5849 guidance, in areas that were classified as Affected Areas and Unaffected Areas. This data would be used to demonstrate that these areas could

be released for unrestricted use following the guidance and guidelines that the NRC uses to terminate NRC licenses.

The design of the site characterization / baseline risk assessment portions of the project scoping plan follow, and adhere to, normal CERCLA guidance for conducting remedial investigations. The design of the Affected/Unaffected rad area surveys follows the guidance in NUREG 5849 to identify the types of surveys that should be conducted. However, following advise from within the Army, SEDA proposed a sampling scheme such that the recommended quantity of data specified in NUREG 5849 would be reduced. In addition, Army Material Command (AMC) guidance on performing radiological surveys was issued after the SEAD 12, 48, and 63 project scoping plan was prepared. The AMC guidance was written to address radiological survey requirements at Army sites where sealed sources were maintained and/or stored. Though the AMC guidance was not used in preparing the SEAD 12, 48, and 63 project scoping plan, the level of effort detailed in the scoping plan prepared by Parsons ES is essentially the same as detailed in the AMC guidance. The two differ slightly in the details of how to perform the surveys.

It should be noted that the scope of work proposed in the SEAD-12, 48, and 63 project scoping plan is greater than that which would normally be proposed for an RI. The decision for the increased scope was based upon these sites having served as storage and maintenance areas for special weapons. The Army, using Sandia National Labs (SNL) for technical assistance, recommended that the survey methodology for these sites follow the guidance provided in NUREG 5849. However, since these sites were never regulated under an NRC license, and, they were not used for functions that are typically licensed by the NRC (i.e. nuclear power generation), the army chose to develop a work plan for these sites such that the level of scope of work needed at these areas would be less than that prescribed in NUREG 5849.

As we have now received comments from the EPA and NYSDEC on the SEAD 12, 48, and 63 project scoping plan, it appears that NYSDEC is asking the Army to restate what the intent of the plan is. NYSDEC commented that if the intent of the plan is to perform a characterization of the site, then what is proposed is sufficient, and in several aspects excessive. However, if the intent of the plan is to obtain data "as part of a final release survey" for these sites, then the proposed level of effort is warranted, but is not sufficient for a final release survey. NYSDEC states that the requirements of NUREG 5849 must be adhered to for the final release survey. EPA's comments make no mention of these issues and it appears that the types and quantities of surveys are generally sufficient.

NYSDEC agrees with the applicability of NUREG 5849 to identify and address the radiological screening/measurement activities that are required at these sites. They indicate, however, that in order for these sites to be released, a final release survey is expected to be conducted at each site.

There are three possible alternatives for addressing NYSDEC's comments on the proposed work. The first alternative is that the Army can decide to treat this investigation purely as an RI. The scope of work would be reduced to provide a full characterization of impacted or potentially impacted areas only (i.e. areas where releases have been documented as well as all areas currently designated as Affected Areas). This alternative would essentially require the same quantity and types of soil, water, surface water, and sediment analyses that are described in the current project scoping plan. Also, the radiological screening and special measurements of the Affected Areas (i.e. swipes in drainage piping and ventilation ducts) would be performed as described in the current plan. The plan would be changed to include fewer direct measurements, and no grid-based soil sampling would be performed. Also, all Unaffected Areas would not be investigated. The benefits to this alternative is that the cost of the project would be reduced by between 25 and 40%. The drawback is that, since these sites are "rad" sites, NYSDEC may require additional surveying to demonstrate that there is no residual radiation at these sites, and SEDA's intention is to clear these sites during the RI/FS investigation

The second alternative is that the project scoping plan be revised to conform with NUREG 5849 to the extent that NYSDEC had indicated in their comments. Based upon some of those comments, this alternative may require a three fold increase in the proposed scope for the building surveys, and a two fold increase in the number of soil samples submitted for laboratory analyses. The benefit to this alternative is that NYSDEC would accept the RI work as the final release survey. We would have sufficient information to a) release for unrestricted use all areas that are free of residual radiation, and b) identify all areas (if any) that need localized remediation. The draw back to this alternative is the substantial increase in survey, analysis, and interpretation costs.

The third alternative proposed is that NUREG 5849 be used only as guidance and that some flexibility be allowed regarding the implementation of all the requirements in that guidance. These sites were not regulated by an NRC license, and all activities relating to the storage and maintenance of special weapons has ceased. As such, these areas should be considered as being equivalent to NRC sites that have been decontaminated, i.e. all nuclear materials were decommissioned. Since these sites were used for storage and maintenance only, the currently proposed scope, which is a modification of NUREG 5849, would require little modification to demonstrate that these sites are free of residual radiation. The benefits to this alternative are the same as those of the second alternative: The information collected would be considered sufficient to a) release for unrestricted use all areas that are free of residual radiation, and b) identify most of the areas (if any) that need localized remediation. The drawbacks to this alternative are that the cost to complete the scope may increase moderately and the Army would likely be required to provide assurances that any residual radiation not found during the RI will be remediated.

Those issues that would require modifications to the current plan would be discussed with all of the parties involved to obtain a consensus on what the final work plan should be. These issues would include:

- what criteria can be used in classifying Affected and Unaffected Areas
- what does NYSDEC expect for a background database
- what density of soil samples is expected for Affected and Unaffected Areas
- what density of direct measurements is expected
- what selection criteria should be used in determining the quantity of archived samples that would be analyzed
- what guidelines should be written into the project scoping plan for soil, wipe, and scanning/measurement surveys

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As a reminder, it should be noted that these investigations are "one-shot deals", and that the scope of work for these RIs must be defined within this constraint. Returning several times to perform characterization surveys, verification surveys, and final release surveys is not within SEDA's design plan and budget for investigating Solid Waste Management Units.

RADIATION SITES NARRATIVE
SEADs-12, 63, and 48

This project consists of three sites which radioactive material may have been released. SEAD-12 and 63 have been combined as a single operable unit in the Federal Facilities Agreement. SEAD 48 is a separate operable unit because of location and threat.

SEAD-12 and 63 have had a contract established to perform an RI/FS. The Work Plan is being reviewed by the regulators. Field work is scheduled to start in the Summer of 1997.

SEAD-48 has a low-relative risk and priority in relation to reuse and is not scheduled until FY2000.

SEAD-12, Building 804 and associated Radioactive Waste Burial Sites:

- Five separate burial pits are located northeast of Building 813. General dimensions of these pits are unknown.

- Building 804 and two burial pits are located north of Building 804. A 5,000 gallon tank was buried in one of the pits--size of pit is unknown. The other pit was used for dry storage with dimensions of approximately 18 feet long by 10 feet wide by 4.5 feet deep.

Approximate dates of usage is pre-1962.

Radioactive wastes were reportedly buried in the five small pits located northeast of Building 813. The underground storage tank located north of Building 804 was used for storage of wastewater. The wastewater was generated during the washing of radioactive, contaminated clothing. The other pit located near Building 804 was used for dry storage.

The burial pits northeast of Building 813 were excavated in 1986. A sizeable amount of lab trash was found in the pits. The excavated trash and soil were loaded into containers and shipped to an authorized off-post radioactive waste landfill in December 1987. Surface-level radiation readings indicated that all radioactive contamination had been removed from the area.

The burial pits north of Building 804 which included the 5,000 gallon tank and dry storage pit was also excavated in 1986. No suspicious debris was encountered in the dry pit except for pieces of plywood. This location was found to be free from radioactive contamination.

Specific waste disposed of were radioactive and nonradioactive wastes from the clinic (gloves, etc.) and classified metal parts.

SEAD-63, Miscellaneous Components Burial Site:

This burial site is approximately 80 feet by 65 feet, used from the 1950s to 1960s. Inert materials were buried in the pit (i.e., classified parts). The burial site has not been excavated.

SEAD-48, Pitchblende Storage Igloos: The 11 munition igloos (EO801-EO811) are within the secured area along road EO800. Each igloo measures approximately 25 feet wide by 80 feet long. At the north end of each igloo is a 6-foot by 6-foot concrete pad. A gravel area exists from the pad to the road. The remaining area surrounding the igloos is field grass. Approximate dates of usage is 1940s to present.

For a brief period in the 1940s, the 11 munition igloos were used for storage of approximately 2,000 barrels of pitchblende ore. Later on, the pitchblende ore was removed and conventional munition was stored in the igloos until approximately 1979. The igloos were empty until they were cleaned up in 1986.

Presently, these igloos are inactive. Migration pathways are soil, groundwater, and surface water.

In 1976, the 11 igloos were radiologically surveyed by the Oak Ridge National Laboratory for the U.S. Department of Energy (DOE). The survey measured the extent of contamination in the igloos, the surface waters in the vicinity and along a rail spur leading to the area. The survey concluded that no health hazards existed. However, it was found that the radiation levels present were in excess of allowable concentrations that would permit unrestricted use of the igloos and the surrounding areas. The survey indicated that the residual radioactivity from the ore was confined to the interiors of eight igloos and to the outdoor areas near the entrances to these igloos. In May 1985, the U.S. Army Ballistics Laboratory conducted a radiological survey of the 11 igloos which comprise SEAD-48. The recommendations of the report were:

1) Decontamination of those areas in the interior of igloo EO804 exceeding 5000 dpm/100 cm^2 alpha contamination be accomplished by sandblasting grinding or other dry surface clearing methods and

2) Soil removal to a depth of six inches to reduce outdoor levels to background at EO804 and EO811. In 1985, SEAD developed a Plan for Reclamation of the igloos. The SEDA Safety Officer coordinated the decontamination of the bunkers in July 1985. SEDA removed contaminated soils and residues around the igloos and vacuum blasted the concrete on the interior of the igloos.

The materials collected at the area were disposed of under the U.S. Nuclear Regulatory Commission regulations. The residues were transported to a disposal site located in Barnwell, SC. The cleanup activities were coordinated with the new York State Health Department. the United States Army Environmental Hygiene Agency (AEHA) provided a close-out survey of the area, concluding that, "after decontamination, the bunkers (E801-E811) and the surrounding area conform to the requirements for unrestricted use."

A close-out survey of the bunkers was conducted by the U.S. Nuclear Regulatory Commission (NRC) in October 1987. NYSDEC and NYSDOH performed a follow-up radiological survey of SEAD-48 (pitchblende storage igloos FO802, EO806, EO808, EO809, and EO710 (a background location) on June 10, 1993. Soil and wipe samples were collected form igloos EO804, EO806, EO808, and EO710. The survey results indicate that there are several areas of contamination inside and outside of igloo EO804 and one hot spot in igloo EO808 that require further remediation. The areas of contamination in Building IO804 are along the concrete drainage ditch, in the outside drains that exit the building on the north wall at a height of one to two feet above ground level, and in the soil outside near the drains. The debris samples, collected inside Building EO804 and in one spot in Building EO808, and the soil samples have elevated concentrations of U-238 and Ra-226.

AEC PEER REVIEW PROJECT QUESTIONNAIRE

(version 97.1)

Instructions: This worksheet is provided as a tool to guide your thinking about your project. These questions represent the type of information which the Peer Review Team will require to fully evaluate your project.

A. PREPARER INFORMATION:

Preparer's Name & Phone No.: Stephen M. Absolom (607) 869-1309

B. PROJECT IDENTIFICATION DATA:

1. Installation: Seneca Army Depot Activity

2. Environmental Program Requirement (EPR) project number: SE0094S008

3. Defense Site Environmental Restoration Tracking System (DSERTS) site I.D. codes(s): SEAD-012, 048, 063

4. OU Code (if applicable): 5

5. Date of Base Realignment and Closure Cleanup Plan (BCP) and latest BCP abstract: Version 1 Final Report: October 1996

6. Project executor information: CENAN/CEHND

7. Project Description: RI/FS through RA for the Rad Sites project. It includes the former Cold War Weapon Storage Area (SEAD-012, 063) and igloos used to store pitchblend ore (SEAD-48).

C. CHEMISTRY DATA:

1. Has the data been placed (or expected to be placed) in an electronic format?
Yes If so, in which format (IRPIMS, EMIS, etc) does it exist.
Oracle database owned by Parsons Engineering-Science, Inc.

2. If not, are there plans to place the data into an electronic format? Explain.

N/A

3. What types of data exists for the project?

- X chemistry
- X hydrogeological
- X lithological
- X climatological
- _____ demographic
- _____ other - specify:

4. Was the RI/FS SAP reviewed and approved by the regulators?

All SAPs are reviewed and approved by the regulators.

5. Did the QAPP follow CERCLA (CLP) or RCRA (SW846) protocol?

CLP protocol is followed, RCRA Corrective Action personnel accept procedures.

6. Did the reporting limits meet all chemical specific ARARs?

Yes

7. Was the data validated and qualified using the US EPA CLP National Validation guidelines (1991)? Yes If not, identify what data validation procedures were used.

8. Identify the major laboratory and field sample contamination. List the analyte and its range of concentration.

SEE ENCLOSED TABLES

9. Identify the percentage of data qualified as estimated (J) or unusable (R).

SEE ENCLOSED TABLES

10. Identify any analytes that had a combined total of over 25 percent of its data qualified as unusable (R) or estimated (J)

SEE ENCLOSED TABLES

D. SITE DESCRIPTION:

1. Discuss the proximity of the site to the base boundary, surface water sources, schools, or the industrial complex.
SEAD-12: 150 ft to north boundary; SEAD-63: 2700 ft to north boundary;
SEAD-63: 2500 ft to west boundary and Silver Creek flows through this site.

2. What is/are the contaminant source(s)?:
SEAD-12: low level radioactive waste burial site; SEAD-63: drums of inert parts from WSA; SEAD-48: pitchblend ore storage.

3. Were interim removal actions taken prior to completion of the RI/FS process? Discuss.
SEAD-12A: In 1986, lab waste excavated and disposed off site; SEAD-48: In 1985, igloos decontaminated (closeout report completed in 1987).

4. Discuss the extent of horizontal and vertical contamination of soils (include the distance from the maximum depth of soil contamination to top of the saturated zone):

5. Regarding ground water,

a. If known, provide the aquifer class. N/A

b. Is there more than one aquifer? Yes

c. If more than one, which are impacted (or potentially impacted) by the contamination? Shallow aquifer

d. Is the aquifer(s) confined? If so, describe the confining unit. Is the bedrock fractured?: Yes; bedrock; bedrock not fractured.

e. Is the aquifer used as drinking water source by residents? by animals? (describe): No; No

f. For aquifers not currently used as a drinking water source, is it technically reasonable to expect that they may be used as such in the future? Yes

g. What is the depth below the ground surface to groundwater?
0 to bedrock

h. Is the direction of flow such that potential receptors could be impacted?
Yes; SEAD-12, 63 flow west/northwest; SEAD-48 flow west/southwest.

i. What is the flow rate? _____

6. Describe the extent of plume contamination.
Unknown

7. List the major contaminants and specify units:

Contaminant:	Soil	G/W	Surface H_2O	Sediment
radium-226 (12A)	1,342 mrem/yr	gross alpha rad.		
cadmium (12A)	94.3 mg/kg		PCP	
iron (12B)				
alpha radiation (48)				
radium 226 (63)				
cadmium (63)				24 mg/kg
SVOCs (63)				14 mg/kg

E. CONCEPTUAL SITE MODEL (CSM) - RISK ASSESSMENT:

The CSM is developed for all sites following EPA guidance. This is first described in the Generic Workplan for all RI/FS's at SEDA, which is expanded to include site-specific scoping documents, and the RI if a full RI/FS is warranted. The CSM is further refined after additional site characterization; this information is obtained based upon first limited sampling, Expanded Site Investigations (ESI), and an RI if required.

The CSM is first developed describing all known contaminant sources and receptor pathways. The CSM is then used to develop and implement additional studies that may be required to fully assess risks to human health and the environment. The CSM takes into account both site conditions and accepted pollutant behavior to formulate an understanding of the site. This serves as a basis for determining necessary additional studies for the RI, as well as eliminating additional work at an earlier stage (the ESI) if warranted with the levels of contaminants and/or risks of these levels with respect to future use. The model evaluates historical usage, physical site characteristics, and the environmental fate on constituents.

F. ENGINEERING/TECHNOLOGY REVIEW:

This site has not yet been fully characterized (ie. RI/FS) to identify which technology would be suitable for the site contaminants and site conditions. As the site investigations

progress through to the Feasibility Study, a Proposed Remedial Action Plan will address the fate of contaminants associated with the site.

G. LONG TERM MONITORING/ LONG TERM OPERATION:

This site has not been remediated. Long term monitoring and/or long term operation decisions have not yet been determined and approved.