

APPENDIX A
ANNEX AN
STATEMENT OF WORK
CHEMICAL WARFARE MATERIEL
ENGINEERING EVALUATION/
COST ANALYSIS (EE/CA)
AT
FORT MCCLELLAN, ALABAMA
September 25, 1998

1.0 OBJECTIVE

The objective of this task order is for the A-E to perform an Engineering Evaluation/Cost Analysis for areas at Fort McClellan with potential Chemical Warfare Materiel (CWM) contamination.

2.0 BACKGROUND

Fort McClellan is a U.S. Army facility under the control of the U.S. Army Training and Doctrine Command (TRADOC) and is scheduled to be closed under the Base Realignment and Closure (BRAC) program. Chemical Warfare Materiel (CWM) and Ordnance and Explosives (OE) are suspected to exist on this property.

2.1 General. The work required under this Scope of Work (SOW) falls under the BRAC program.

2.1.1 CWM and OE are a safety hazard and, if present, constitute a hazard to the public and the environment. The Architect-Engineer (A-E) will perform this work in a manner consistent with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and the National Contingency Plan (NCP). For any actions on site, administrative requirements of federal, state, or local permits are not

required, but the substantive permit requirements shall be fulfilled. The provisions of 29 CFR 1910.120 apply to all actions taken at this site.

2.1.2 The A-E will perform the work in a manner consistent with the response program identified in the National Contingency Plan (NCP), 40 CFR 300, and particularly parts .400 through .415 and .800 through .825 and the guidance contained in "Guidance on Conducting Non-Time Critical Removal Actions under CERCLA." The contractor will conduct work activities in areas potentially contaminated with unexploded ordnance in full compliance with US Army Engineering and Support Center (CEHNC), Headquarters, US Army Corps of Engineers, Department of the Army, and Department of Defense requirements regarding personnel, equipment, and procedures.

2.2 SITE DESCRIPTION.

2.2.1 Location. Fort McClellan is located northeast of the City of Anniston, Calhoun County, Alabama. To the west are the areas known as Weaver and Blue Mountain. To the North is the City of Jacksonville. The Talladega Forest is to the east of the post.

2.2.2 Site History. Fort McClellan has been used for artillery training of troops and the National Guard as early as 1912 to present day. In 1941, McClellan became site of the Chemical Corps Training Command. In 1962, the U.S. Army Combat Developments Command Chemical Biological-Radiological Agency moved to Fort McClellan. In 1973, the Chemical Corps School along with the U.S. Army Combat Developments Command Chemical Biological-Radiological Agency closed. In 1979, the U.S. Army Chemical Corps School re-established along with a training Brigade for Basic Training.

2.3 Areas of Concern. The archive search report (ASR) identified the following areas with potential of CWM contamination.

2.3.1 Training Area 31. This area, approximately 30 acres northeast of the cantonment area, was originally part of Range 31. Later it became the Technical Escort Reaction Training Area. Areas or objects were contaminated with 40cc samples of toxic agents to allow students to practice reaction and decontamination procedures.

2.3.2 T-38 (Reservoir Ridge). This area, approximately 6 acres east of the cantonment area, was used as a toxic agent storage yard. Chemical Agents, HD, VX, and GB were stored here. Later the nerve agents were moved to Igloo 13 at the ASP. In 1973 the remaining blister agents were transferred to a near-by motor pool in preparation to move the agents to Anniston Army Depot.

2.3.3 Smoke Ranges, R and S. This area, approximately 300 acres east of the cantonment area, is identified as a Chemical Area on the 1958 Range Map. During site visits, Impact Area signs were found, a sign identifying Smoke Ranges, R and S and to the east of the site an expended Livens Round.

2.3.4 Agent ID Area. This area, approximately two acres south east of the commissary, shows up on the 1969 Orientation Map of the Chemical Corps Student Guide. Exact use is unknown. There is no visible surface evidence of any Chemical or Ordnance use.

2.3.5 Cane Creek Training Area. This area, approximately two acres south of the cantonment area, first appears on the 1956 map of Chemical Corps Training Areas. In 1958, it is used for classes in decontamination equipment. Cane Creek may have been used as a field water source. Use of toxic agents in this area is unknown.

2.3.6 Naylor Field. This area, approximately 10 acres south of the cantonment area, was used for training in the decontamination of equipment contaminated with Mustard and was originally known as the Howitzer Hill Decontamination Area. This

area was closed in 1973. Signage discovered during the site visit showed that signs had been placed in 1973 to warn of the toxic area and that no digging was to be done in the area.

2.3.7 Blacktop Training Area. This large blacktop area, approximately 3 acres south of the cantonment area, is identified on the 1956 Chemical Corps Training Areas map and the 1969 Chemical School Orientation Map. Various demonstrations and training may have occurred in this area. Use of toxic agents in this area is unknown. Within the blacktop training area is a fenced in area, approximately $\frac{1}{4}$ acre, which may have been used to store agents or to conduct toxic agent training in conjunction with the decontamination training on the adjacent blacktop area.

2.3.8 Dog Training Area. This fenced area, approximately $\frac{1}{4}$ acre south of the cantonment area, has a concrete pad that is severely eroded. This yard may have been used to store agents or used for toxic agent training in the form of "Transfer Operations".

2.3.9 Reaction Area T-5. This area, approximately 12 acres south of the cantonment area, includes the Dog Kennel Area and the wooded area to the south. Previous investigations indicate that the area was established around 1965. The area is shown on the 1969 Orientation Map. Reaction training using live agents HD, VX, and GB took place in this area. The service road in the wooded area has a short section of blacktop which may have been associated with some type of training. The Dog Kennel Area is fenced with an inner yard. Mustard confidence training using drops of Mustard may have taken place in the Quonset hut inside the perimeter fence. Toxic agents may also have been stored in the inner fenced yard.

2.3.10 D and I Area. This area, approximately 3 acres south of the cantonment area, is on both the 1956 Chemical Corps Training Areas map and the 1969 Orientation map. The site was used for agent Detection and Identification training and included

the use of toxic agents such as HD and GB, simulants and other chemical agents. Previous investigation indicates at least one burn pit of 484 square feet. This area was closed in 1973. Signage discovered during the site visit showed that signs had been placed in 1973 to warn of the toxic area and that no digging was to be done in the area.

2.3.11 Old Burn Pit. This pit, approximately fifty square feet in size, was discovered during the site visit. The pit is located behind a motor pool area, north of the dirt service road which runs along the north border of the D and I Area. It is unknown what items were burned and/or destroyed in the pit.

2.3.12 Field Personnel Decontamination Area. This area, approximately one acre in size, appears as the Field Decontamination Station and is shown as being south of the Decontamination Building. On the 1969 Orientation map it is shown as being on the north side of 24th Street midway between 12th Avenue and 13th Avenue. Exact use is unknown.

2.3.13 Decontamination Building. Building 3185 located south of 25th Street is identified on the map in the 1958 Chemical Corps Training Command brochure. Exact use of the building is unknown. Use of toxic agents in the building is also unknown.

2.3.14 CBR Proficiency Area. This area, approximately five acres south of Sumerall Gate Road and east of 11th Street, appears on the 1969 Orientation map of the Chemical School Student Guide. How the site was used by the Chemical School is unknown. Use of toxic agents in this area is also unknown.

2.3.15 South Gate Toxic Gas Yard. This area is referenced by the 1956 map of Chemical Corps Training Areas. The exact location and what items the yard stored are unknown.

2.3.16 Sunset Hill Area. This area was requested in September 1951 to support the Chemical School with the following types of training or training facilities:

Protective Shelter

Decontamination Procedures

Biological Sampling

Gas Detection

Operation of Decontamination Equipment

Toxins were permissible if the area was posted or fenced. This area may have seen use during the building of the permanent Chemical School facilities.

2.3.17 Old Toxic Training Area. This area is located south and/or east of building 3183 and reportedly occupied up to 10,000 square feet. The site was reportedly used from the 1950s through the 1960s for training in the identification and detection of HD.

2.3.18 Mustard Spill Areas. Four areas were identified as locations of mustard spills from previous reports:

1. South of Building 141
2. North of TASC
3. South of 23rd St., East of MP Museum
4. West side of 10th St., either side of Summerall Gate

Road

2.3.19 Goat Yards. Goats were used in the GB nerve agent demonstrations as well as pigeons (rabbits were employed in the VX exercises). Three goat yards were identified from previous reports:

1. On site of current MP School
2. Inside the ASP
3. Northwest of Range 18 (Howitzer hill fenced area)

2.3.20 Range 24A. This range was originally called Range 24 and was built after WWII. On the aerial Map, it is identified as a rifle range. It appears on the 1958 Range Map as Range 20, Sub-Machine Gun Range. On the 1967 Range map, the use is listed as Demolition Area, Range 24. By 1974, the name had changed to Range 24A. In 1990, the range is listed as Multi-Purpose (Smoke, Demo & Flame Field). The range is located within the impact area

of the WWI Artillery Impact Area. The range was also used for EOD training in the destruction of Chemical artillery shells. Demonstrations showing the effects of mustard agent on skin may also have taken place at the range. Glass vials of chemical agent may also have been destroyed at this range.

3.0 TASKS

3.1 General. The A-E has been tasked in a separate delivery order to prepare and maintain the Site Safety Submission (SSS) for the field effort tasked under this task order. Sub-tasks under the SSS delivery order include (1) Site Visit and Records Review, (2) Preparation of Work Plans including all subplans and Standard Operating Procedures (SOPs), (3) Coordination with other agencies for their portions of the SSS, as well as maintaining the SSS. The specific requirements for these tasks to support this SOW are included in Appendix A.

3.2 (TASK 1) BRUSH CLEARING and SURFACE DEBRIS REMOVAL. The A-E shall remove surface debris at those sites identified and approved in the work plan for the purpose of defining and redefining anomalies. The A-E shall clear brush and surface debris/scrap metal prior to geophysical surveys. All necessary brush and vegetation shall be removed. Scrap metal and debris shall be disposed of at a local scrap dealer and local landfill. The debris disposal or relocation shall be stated in the work plan.

3.3 (TASK 2) LOCATION SURVEYS and MAPPING.

3.3.1 UXO Safety. The A-E shall provide the survey and mapping requirements detailed in this SOW. The approved Work Plan does not take precedence over this SOW. During all field and intrusive activities, the survey crew shall be accompanied by an UXO specialist. The UXO specialist shall conduct visual UXO surveys for surface ordnance prior to the survey crew entering a

suspect area and a magnetometer survey of each intrusive activity site to ensure that the site is anomaly free prior to the survey crew setting monuments, driving stakes, or establishing other points. Based on site conditions, it is possible that an EOD escort will not be required in all areas at all times after the initial site visit. However, such a decision will be made jointly by the on-site Safety Officer and the USAESCH Safety Specialist who may rescind or modify the decision at any time.

3.3.2 All location survey and mapping required by this Task Order shall be conducted and/or supervised by a Registered or Professional Land Surveyor (RLS/PLS) registered and licensed by the State of Board of Registration for Professional Engineers and Land Surveyors in the State of Alabama. All surveying maps and drawings required by this SOW shall be sealed and signed by the RLS/PLS.

3.3.3 Horizontal and Vertical Control. No additional monuments shall be required for this project.

3.3.4 Location Survey. The boundary corners and individual corners within the areas being investigated shall be established using precision surveying methods. Each corner on the boundary of the area shall be set with a two-to four-foot long, 3/4-inch pipe or 3/8-inch rebar, along with a guard stake that is painted with high visibility pink or orange paint. Each of these corners shall be located to the closest one-hundredth of a foot (0.01 ft) and referenced to Alabama State Plane Coordinate System (Alabama East) the North American Datum of 1983 (NAD83). No other coordinate system shall be acceptable. Each corner of sampling grid corner shall be set with a 2"x2" hub and located to the closest 1.0 ft. Each of these corners shall also be referenced to Alabama State Plane Coordinate System (Alabama East) NAD83.

3.3.5 Mapping. The A-E shall be provided with site maps for each area that will be investigated for the project. Each corner of each area being investigated and each grid sampling point shall be plotted on these maps. State plane grid

coordinates for each large area shall be shown at each corner. Coordinates for the corner of each grid sampling point area are not required on the 1 in=200 ft. maps. Individual maps for each grid sampling area that is being investigated for OE shall also be prepared at a scale of one inch = 20 feet (1" = 20') or larger. The final maps of these grid sampling areas shall be provided on 8 ½-inch by 11-inch bond paper. All of these corners shall be used as the basis for geophysical mapping, navigation, and OE sampling. The staked grid locations and corner coordinates shall be compiled into a CADD file to reference for overlay with the base mapping data. This file shall include unique grid names and each corner coordinate staked. All grids and corner coordinates shall be tabulated into an Excel spreadsheet for future use during geophysical mapping and sampling. This data shall be compiled during staking operations to provide digital representations within 48 hours after completion of field activities. The 1"=20' maps shall indicate the number of each verified surface UXO and each subsurface geophysical anomaly within the grid. Other notable features within the grid shall also be sketched in.

3.3.6 Final Mapping. All final mapping shall be created by Computer-Aided Design and Drafting (CADD) Personal Computers (PC) and provided to the Government in Microstation 95.0 two-dimensional digital design files on PC CD-ROM (see paragraph 3.15.7). All characteristics such as file naming and relationships, level structures, colors, line styles, weights, etc., in accordance with the surveying and mapping requirements of the Tri-Service Spatial Data Standards (TSSDS) of the current release shall be compiled in the design files. Site maps plotted from these design files shall be provided on reproducible (mylar) standard metric A-1 size drawings which are 841 millimeters (mm) by 594 mm (33.1 inches 23.4 inches) in size. The location, identification, and coordinates of all the control points and

boundary corners shall be plotted on the reproducible (mylar) maps. Each control point shall be identified on the map by its name or number and the final adjusted coordinates and elevations (to the closest 0.01-ft). Each map shall include a grid north, a true north, and magnetic north arrow with the differences between them shown in minutes and seconds. Grid lines or tick marks in feet and at systematic intervals shall be shown with their grid values on the edges of the map. Also, a legend showing the standard NGS symbols used for the mapping, a map index showing the site in relationship to all other sites within the boundary lines of the project area, a border, and a standard COE title block shall be shown on each map.

3.3.7 Hardware and Software Platform and Computer Files.

All final text files generated by the A-E under this Task Order shall be Word 97, IBM PC-compatible format. All data shall be provided as coincident files in State Grid Plan Coordinates in Microstation 95 CADD to run on typical properly configured Windows 95 and NT 4.0 PCs. The individual CADD files shall be referenced to a master file that allows simultaneous viewing of all historical layers and figures. Raster data shall be georeferenced to the CADD files. The CEHNC current high-end target machine is an Intergraph TDZ-425 dual 266 Pentium II with 128 megabytes of memory. The workstations run under the Windows NT 4.0 operating system with Microstation 95 utilizing the MGE 6.0 complement of software and the Oracle 7.3 relational database. Current other GIS project related software includes:, IRAS B, IRAS C 5.04 and IRAS Engineer, DB Access, MGE Basic Nucleus, MGE Analyst, MGE Map Finisher, MGE Projection Manager, MGE Grid Analyst, MGE Modeler, Inroads, Base and Advanced Imager. Formal submittals shall be in the proper format and recorded on media which will permit their loading, storage, and use without modification on the target system.

3.3.8 Items and data to be submitted to USAESCH are as follows:

3.3.8.1 Field Survey. The originals of all field books, layout sheets, computation sheets, abstracts, and computer printouts. All of these items shall be suitably bound and clearly marked and identified.

3.3.8.2 Two copies each of all the tapes, floppies, or CD's required by this SOW.

3.3.8.3 A tabulated list of all control points and monuments showing their final adjusted coordinates and elevations (in meters and feet to the closest 0.001 meter and 0.01 foot) established and/or used for this survey. A tabulated list of each individual boundary corner and each grid corner shall also be provided showing the adjusted coordinates to the closest foot.

3.3.8.4 A "Report on Establishment of Survey Marker" (Description Card) on each permanent control monument established and/or used for the survey. In addition to the name or ID number of the monument, the cards shall show the adjusted coordinates and elevations (to the closest 0.01 foot and 0.001 meter), a written description for locating the monument from a well known and easily identified point, and a sketch showing how to locate the monument. These descriptions shall be submitted with one description being on a 5-inch by 8-inch (5" x 8") card, or two descriptions may be submitted on a 8 1/2-inch by 11-inch (8 1/2" x 11") sheet of bond paper.

3.3.8.5 Drawings. The maps (mylar) and CADD files of all areas mapped for this project. The original and one copy of each final map (standard metric A-1 size and 8 1/2" x 11" sheet of bond paper) shall be delivered to USAESCH.

3.3.8.6 All original and unique items created and/or used to create the end products specified with these descriptive narratives.

3.3.9 Aerial Photography. Current and historical aerial photographs of Fort McClellan will be provided to the A-E by the Government. These will establish the base background for plotting EE/CA grids and other field investigation features.

3.4 (TASK 3) GEOPHYSICAL Investigation.

3.4.1 Geophysical Proveout. The project will require a site-specific geophysical prove-out test plot that includes both inert OE and scrap of the type and at the depth anticipated within the investigation area for the purpose of evaluating geophysical instruments and developing the standard response for the selected instrument(s), instrument configuration, and techniques. This plot shall be used to determine the adequacy of proposed geophysical instruments to meet project objectives. When the most appropriate instruments for the project are selected and a standard response for those instruments at this project site is developed, this plot will then serve as the geophysical instrument standard response test plot. The site-specific test grid shall be geophysically mapped in the same detail and with the same procedures as planned for the remaining project area. The Contractor shall evaluate the geophysical data using each candidate instrument, configuration, and technique to determine the best geophysical investigative technology and instrument for the OE problem and site conditions. As part of the study, the allowable tolerance for both flagging and electronic positional accuracy shall be established and confirmed using locating techniques to be employed during the project geophysical survey. Methods of measuring standard instrument response(s) and the standard response of each instrument shall be established. This study shall create recommendations pertaining to geophysical instruments, techniques, methods, data transfer, and quality control supported by cost and performance, and shall be submitted as a report for approval prior to beginning the geophysical survey. This report shall include a copy of all data

for technical review and evaluation. Each instrument, instrument configuration, and crew shall be baselined at the site-specific geophysical test grid to verify that each instrument, instrument configuration, and crew can achieve a result within 10% of the standard response as determined during the geophysical investigation prove-out.

3.4.2 Geophysical Mapping. Following the removal of brush and surface debris and the Geophysical Proveout, the A-E shall use the approved geophysical mapping technology to map the areas as approved in the Work Plans. The technology shall digitally capture the instrument readings into a file coincident with the Alabama State plane grid coordinates. Navigation and instrument position shall be based on established grid corner points and monuments. This field data shall be checked, corrected, and processed into ASCII files in the ADF file format. Corrections such as for navigation, instrument bias, and diurnal magnetic shift shall be applied but there shall be no filtering or normalization of the data. All corrections shall be documented. The data shall be presented in delineated fields as "X, Y, and Z" where "X" and "Y" are local State Grid Plane Coordinates in Eastings and Northings and "Z" is the instrument reading. Where there are multiple instrument values such as with the EM instruments then the channels shall be provided in separate ADF files. The data shall be provided in processing block files that approximates a ground area of 400 ft. by 400 ft. or as determined during the geophysical prove-out. This digital data shall be provided to the Government by Internet connection to the CEHNC OE server within 7 days from the geophysical mapping for the initial GIS threshold analysis processing. All field data shall be accompanied by a Word file that documents the field activities associated with the data and the processing performed. Additional data such as scanned photos, annotated CADD, and mapping data shall be provided to accurately document field

activities. The locations of the day's work shall be represented either by outlining the limits on a coincident CADD file representing the area or by a scanned hard copy map. An archive copy on PC-CD ROM format shall be provided to CEHNC with receipt within 2 weeks from completion of that day's survey.

3.5 (TASK 4) INTRUSIVE EXCAVATION INTO SUSPECT CHEMICAL WARFARE MATERIEL BURIAL SITES. After the brush clearance operations, surface debris clearance, and geophysical mapping, the A-E shall identify the anomalies proposed for investigation. After receiving government concurrence on anomalies to be investigated, while following all safety procedures in the SSHP and monitoring procedures outlined in the approved Work Plan, the A-E and Technical Escort Unit (TEU) shall excavate anomalies. The A-E will turn control of the site over to TEU in the event a CWM item is found which exceeds the Maximum Credible Event (MCE). The A-E may assist TEU, if required, to secure and remove chemical ordnance. Once the chemical ordnance item is out of the exclusion area, TEU shall arrange for any further evaluation and disposition. If the item is an explosively configured chemical munition, the A-E as directed by CEHNC may be required to assist in the disposal with TEU and PMNS. Regulatory notification shall be made by the Government prior to demolition of explosively configured chemical munitions.

3.6 (TASK 5) PROCESS SCRAP METAL in SUSPECTED CHEMICAL AREAS. All scrap metal recovered from excavations shall be placed in a container capable of being sealed and heated. After heating and retention, the container shall be monitored for low levels of CWM. The A-E shall provide a hazardous waste storage and/or disposal facility capable of accepting and treating contaminated waste. The A-E shall provide all necessary personnel and equipment to accomplish this task.

3.7 (TASK 6) SAMPLING and ANALYSIS.

3.7.1 The A-E shall obtain soil samples from the suspected burial pits which could potentially have been contaminated with CWM or decontamination products and obtain soil samples at intervals justified and approved in the Work Plan. Other sites may be proposed with adequate justification in the Work Plan for Government approval. Sampling and analysis may also be required of Investigative Derived Waste (IDW).

3.7.2 Chemical Analysis of Samples. Soil samples shall be screened in the field for the presence of CWM if samples are to be sent to an offsite laboratory for analysis. CBDCOM will take one of the sub-samples taken at each sampling location to conduct a head space test. If agent is not detected the other sub-samples may be sent to the approved laboratory. Samples field identified as containing CWM shall be immediately handled as described in the approved work plan. The samples shall be subdivided for CBDCOM head space, and ERDEC certified laboratory chemical materiel analysis. If samples are analyzed by ERDEC onsite for chemical agent and chemical agent degradation products, field screening prior to analysis is not required.

3.7.2.1 Samples collected shall be analyzed in the laboratory by ERDEC for CWM, CWM degradation products. A minimum of two sub-samples shall be taken at each proposed sample location or depth. One sub-sample shall be used to take off-gas head space readings to insure CWM is not present in the sample. Another sub-sample shall be analyzed for CWM/OE and constituents/degradation products. Additional samples as identified and approved in the work plan shall be collected for quality control analysis.

3.7.2.2 Health-based exposure standards of the constituents of CWM/OE and degradation products shall be used if compound specific standards are unavailable. If health-based standards

are not available, then land disposal contaminant level restrictions shall be applied to defining the extent of contamination.

3.7.3 IDW Letter Report. A separate letter report for IDW shall identify, at a minimum, the container identification number, the location and total number of containers in each area and site wide, the number of samples obtained to fully characterize the containers, the analytical methods run, the analysis obtained, and proposed disposal options, and cost. A preferred alternative for IDW disposal shall be provided which includes, at a minimum, the proposed disposal location(s), associated treatment, time frame associated with storage, removal and treatment, regulatory impacts, and cost.

3.8 (TASK 7) IDW DISPOSAL. The A-E shall, if directed by the CO, dispose of the bulk and or containerized IDW (i.e., hazardous and toxic waste, decontamination wastes). The containers shall be located, secured, labeled, sampled, and analyzed IAW the approved work plan. After receipt of the letter report recommending appropriate disposal actions, the CO shall direct the A-E in the disposal of IDW. The A-E shall perform the IDW disposal in a timely manner. Cost for the disposal of IDW shall be obtained in writing from a minimum of three independent sources.

3.9 (TASK 8) PUBLIC AFFAIRS. The A-E shall assist CEHNC Public Affairs Office (PAO) and the Corps of Engineers, Mobile District PAO in developing and executing a Public Affairs program to include public meetings and Restoration Advisory Board (RAB) meetings. A press release will be issued to update the local residents of the on-going activity and any activity that is planned for the immediate future. Future plans, unless definitely approved by DA, Deputy Chief of Staff for Operations (DCSOPS), will not be discussed or speculated upon.

3.9.9 Aerial Photography. Historical aerial photographs of Fort McClellan will be provided to the A-E by the Government. These will establish the base background for plotting EE/CA grids and other field investigation features.

3.10 (TASK 9) RECORD and SUBMIT VIDEO TAPE.

3.10.1 The Government shall provide a video camera to the A-E for the purpose of video taping a sample of each activity from all field tasks of this SOW. Taping shall be of typical activities and accurately depict all work accomplished. The A-E shall furnish all other necessary personnel and equipment.

3.10.2 The video tape shall be standard VHS 1/2-inch color tape with voice background describing the actions being filmed, containing a minimum of 120 minutes footage.

3.10.3 Two copies of the video tape shall be submitted to CEHNC and two copies shall be submitted to the Mobile District.

3.11 (TASK 10) PERFORM RISK ASSESSMENT. Due to limited amount of environmental sampling, the risk assessment effort proposed will not comply with the EPA Risk Assessment Guidance for Superfund (RAGS) and is not intended to fulfill the requirements of a CERCLA baseline risk assessment. Rather, it will be a qualitative public health evaluation comparing data to EPA risk-based criteria and available toxicity data. The risk assessment provided will evaluate human exposures to CWM, and will be based solely on the results of CWM analyses by ERDEC.

3.12 (Task 11) PREPARE EE/CA REPORT.

3.12.1 The A-E shall prepare and submit an EE/CA report fully documenting all field work and subsequent evaluations and recommendations made by the A-E. The EE/CA report shall describe the site history, briefly describe previous work conducted at Fort McClellan, the work conducted under this task order, and the results. The report shall also contain the A-E's conclusions as to the nature and extent of CWM contamination at Fort McClellan and provide recommendations for future work at Fort McClellan.

Fort McClellan should be sufficiently characterized in the EE/CA. The Government will pursue and address any CWM contamination which may be present. The textual portions of the report shall be fully supported with accompanying maps, charts, and tables as necessary to fully describe and document all work performed and all conclusions and recommendations presented. After the site investigation is complete and the baseline site risk is assessed, the A-E shall identify and analyze removal alternatives. In addition, the A-E shall evaluate any institutional controls that can be a course of action.

3.12.2 Evaluate Institutional Controls. The EE/CA report shall fully evaluate physical removal and institutional controls as possible action alternatives. The A-E shall prepare an institutional controls analysis that addresses behavior modification and access control strategies to reduce or eliminate OE risk. The objective of the analysis is also to document which Government agencies have jurisdiction over the OE-contaminated lands and to assess the Agency's capability and willingness to assert control which would protect the public at large from OE hazards. Additionally, this analysis should document the obligation of Government to protect citizens at large from safety hazards under tort law.

3.12.2.1 Institutional Data Gathering for the Analysis. Basic data for the institutional analysis will be collected on forms provided to the A-E by the Government. These forms may be reproduced. The survey data will be collected by a professional Urban Planner or equivalent. Personal or telephone contact insures obtaining quality information. Do not mail the survey forms. All gathered data shall be safeguarded and protected from unofficial use.

3.12.2.2 Institutional Summaries. For each institution having jurisdiction in the contaminated area(s), the following information will be obtained and included in the analysis.

Name of Agency
Origin of Institution
Basis of Authority
Geographic Jurisdiction
Public Safety Function
Financial Capability
Constraints to Institutional Effectiveness (OE Safety)

3.12.2.3 Institutional Analysis Report. The basic report shall follow this outline and shall be appended to the EE/CA:

Purpose of Study
Methodology
Scope of Effort/Selection Criteria
Acceptance of Joint Responsibility
Technical Capability
Intergovernmental Relationships
Stability
Funding Sources
Recommendations

3.12.3 Developing Alternative Actions. The EE/CA will include a full range of alternative plans which address project objectives. After all possible alternatives are identified, the A-E shall screen the alternatives to produce a focused set of action plans which address the concerns of the community, regulators, and the DOD. Infeasible plans will be discarded during the screening process. All plans that survive the screening process must be developed to the same level of detail. All shall be feasible and distinct. A minimum of five alternative plans shall be developed:

One alternative shall emphasize the basic strategy of access control.

One alternative shall emphasize the basic strategy of physical removal.

One alternative shall emphasize the basic strategy of behavior modification.

One alternative shall combine all strategies.

One alternative shall be the "No Action".

Several alternatives that address a single strategy may be developed if there are significant differences in plan performance with respect to selection criteria, and it is pertinent to the decision process. Only the vest of unique strategies will be combined.

3.12.3.1 Institutional Control Alternatives.

3.12.3.1.1 Access control alternatives will be based on concepts such as:

Direct intervention like fencing and other barriers combined with trespass law enforcement.

Land use restrictions (zoning laws and enforcement).

•Regulatory control (permit application, review, or approval of development plans).

Passive measures such as dedication of property to appropriate land uses.

3.12.3.1.2 Behavior modification alternatives will be based on concepts such as:

Notification of real estate defect.

Notices attached to building and/or construction permits.

Training clinics etc.

As a minimum, the A-E shall present alternatives that are completely formulated. All management, execution, and support roles will be identified. All costs incurred by participating institutions will be estimated.

3.12.4 Selected Alternatives. In close coordination with the CO, the A-E shall recommend a preferred alternative. This

EE/CA report shall be prepared IAW the guidance contained in "Guidance on Conducting Non-Time Critical Removal Actions Under CERCLA".

3.13 (TASK 12) PREPARE ACTION MEMORANDUM. The EE/CA will be provided to the public for their review and comments. The A-E shall evaluate any public comments provided by the Contracting Officer and shall incorporate them where directed by the Contracting Officer. Afterwards, the A-E shall prepare an Action Memorandum describing the selected alternative.

3.14 (TASK 13) MEETINGS. The A-E shall attend and participate in meetings with DoD, regulatory, and civilian agencies as directed by the CO.

3.15 (TASK 14) PROJECT MANAGEMENT. The A-E shall, during the life of the task order, manage the task order in accordance with the SOW. All project management associated with this task order, with the exception of direct technical oversight of work described in the preceding tasks, shall be accounted for in this task.

4.0 A-E QUALIFICATIONS AND PROJECT MANAGEMENT

4.1 The A-E shall furnish a staff that is qualified through training and experience to safely accomplish the objective and tasks of this SOW. All personnel shall be identified in the WP and their resumes included.

4.2 Training and all other requirements of 29 CFR 1910.120 and DA Pam 50-6 shall apply.

4.3 The A-E shall, during the life of the Task Order, manage the Task Order to accomplish the SOW Appendix A. The Work Task Proposals shall include scope or level of effort required for the task, milestones, expected completion dates, and any other planning data the A-E will use to accomplish each task.

5.0 SCHEDULE OF MEETINGS AND DELIVERABLES

5.1 Deliverables. The A-E shall provide the indicated deliverables on the following schedule:

Deliverables	Days after NTP
Progress/Meeting Report	10 days after event
Status Report	Monthly
Telephone/Conversation Report	Monthly
Draft EE/CA Report	30 days after field work completed
Draft-Final EE/CA Report	21 days after draft comments rec'd
Final EE/CA Report	30 days after D-F comments rcvd
Public Meeting	10 days after receipt Draft-Final comments
Action Memorandum-Draft	30 days after D-F EECA comments rcvd
Action Memorandum-Final	14 days after draft comments rcvd
Overall Completion Date	30 September 2000

Status Reports and Telephone/Conversation Reports are due monthly. The original of each of these reports shall be sent within 10 days of the end of the reporting period by normal mail to:

Commander
 US Army Engineering and Support Center, Huntsville
 ATTN: CEHNC-PM (Mr. David Skridulis)
 P.O. Box 1600
 4820 University Square
 Huntsville, AL 35816-1822

5.2 Addresses and Distribution. The A-E shall furnish copies of the plans and reports as indicated to each addressee listed below in the quantities indicated. The A-E shall use express mail services for delivering these plans and reports. Following each submission, comments generated as a result of

their review shall be incorporated. All comments will be sent to the CEHNC Project Manager for consolidation prior to incorporation. All comments should be referenced to support those comments. The following addresses shall be used in mailing submittals:

ADDRESSEE

	Draft Submittals	Draft- Final & Final Submittals
Commander US Army Engineering and Support Center, Huntsville ATTN: CEHNC-PM (Mr. David Skridulis) 4820 University Square Huntsville, AL 35816-1822	6	6
Commander US Army Engineer District, Mobile ATTN: CESAM (Mr. Ellis Pope) P.O. Box 2288 Mobile, AL 36628-0001	5	5
Commander US Army Engineer Division, South Atlantic ATTN: CESAD-PM-H (Ms. S. Ernst) 77 Forsyth St., SW Atlanta, GA 30335-6801 ATTN: Mr. Bart Reedy	NA	1
Chief, Federal Facilities Branch U.S. Environmental Protection Agency RCRA Waste Management Division Mail Code 4WD/FFB 345 Courtland Street Atlanta, GA 30365	1	1
Alabama Department of Environmental Management Government Facilities Section, Haz Waste Branch, Land Division ATTN: Mr. Chris Johnson P.O. Box 301463 Montgomery, AL 36130-1463		

US Army Chemical and Military Police 5
Centers and Fort McClellan
ATTN: ATZN-EM
Building 141A, 13th Ave
Fort McClellan, AL 36205-500

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6.0 SUBMITTALS and CORRESPONDENCE

6.1 Format and Content of Engineering Report. All drawings shall be of engineering quality with sufficient details. The report shall consist of 8 1/2" X 11" sheets of paper. The report covers shall consist of durable binders and shall hold pages firmly while allowing easy removal, addition, or replacement of pages. A title shall identify the site, the A-E, the Huntsville Center, and date. The A-E's identification shall not dominate the title page.

6.2 Review Comments. The A-E shall review all comments received through the CEHNC Project Manager and evaluate their appropriateness based upon their merit. The A-E shall incorporate all applicable comments and provide a written response to each comment no later than 21 days after the A-E receives the comment.

6.3 Identification of Responsible Personnel. Each submittal shall identify the specific members and title of the subcontractor and A-E's staff which had significant input into the report. All final submittals shall be sealed by a registered Professional Engineer-In-Charge.

6.4 Presentations. The A-E shall make presentations of work performed and as directed by the CO. The presentation shall consist of a summary of the work accomplished and will be followed by an open discussion.

6.5 Minutes of Meetings. Following the presentation and the public meeting, the A-E shall prepare and submit minutes of the meeting within 10 working days to the CO.

6.6 Correspondence. The A-E shall keep a record of phone conversations and written correspondence affecting decisions relating to the performance of this task order. A summary of the phone conversations and copies of written correspondence shall be submitted to the CO with the monthly progress report.

6.7 Monthly Progress Report. The A-E shall prepare and submit monthly progress reports describing the work performed since the previous report, work currently underway, and work anticipated. The report shall state whether current work is on schedule. If the work is not on schedule, the A-E shall state what actions will be taken in order to get back on schedule. The report shall be submitted to the CO not later than the 10th day of each calendar month.

6.8 Computer Files. All final text files generated by the A-E under this task order shall be furnished to the CO in WordPerfect 6.0, IBM PC-compatible format. All drawings shall be on reproducible (mylar) and digitized 3D design file in Intergraph Corporation format, compatible with CEHNC Graphics system.

7.0 SAFETY REQUIREMENTS

7.0.1 The A-E shall develop and implement a Health and Safety Program in compliance with the requirements of OSHA standard 29 CFR 1910.120 (b)(1) through (b)(4) as required for this effort. Written certification that the health and safety program has been developed and implemented shall be submitted to the Contracting Officer. The written program shall be made available upon request.

7.0.2 The A-E shall prepare a SSHP and submit to the CO for review and approval prior to commencement of any field work. The SSHP shall be prepared IAW guidance in this section and shall comply with all federal, state, and local health and safety

requirements, e.g., the Occupational Safety and Health Administration (OSHA) requirements (29 CFR 1910 and 1926), the U.S. Environmental Protection Agency (USEPA) hazardous waste requirements (40 CFR 260 - 270), the U. S. Army Corps of Engineers Safety and Health Requirements Manual (EM 385-1-1), the U.S. Army Corps of Engineers Safety and Occupational Health Document Requirements for HTRW and OEW Activities (ER 385-1-92), and applicable Army regulations. The A-E shall submit versions of this document IAW the schedule provided in this SOW. The A-E shall revise and re-submit this document as necessary to address all comments and deficiencies.

7.0.3 The SSHP shall address the elements described in this section. The level of detail provided shall be tailored to the type of work, complexity of operations to be accomplished, and the hazards anticipated. Where a specific element is not applicable, state that adequate consideration was given the topic and provide a brief justification for its omission.

7.1 General. The SSHP shall be reviewed, approved, and implemented by a board certified or board eligible Industrial Hygienist with at least 2 years hazardous waste site operations experience. Board certification or eligibility shall be documented by written confirmation by the American Board of Industrial Hygiene (ABIH) and submitted to the Contracting Officer for review. A fully trained and experienced site safety and health officer (SSHO) (a UXO supervisor at minimum) responsible to the A-E shall be delegated to implement the on-site elements of the SSHP. The SSHP shall be in a form usable by authorized U.S. Government representatives and other authorized visitors to the site during site operations.

7.2 Staff Organization, Qualifications and Responsibilities. The operational, health, and safety responsibilities of each key person shall be provided. The organizational structure, with lines of authority and overall

responsibilities for safety and health of the A-E and all subcontractors shall be discussed. An organizational chart showing the lines of authority for safety shall be provided. Each person assigned specific safety and health responsibilities shall be identified and his/her qualifications and experience documented by a resume in the SSHP.

7.3 Site Description and Contamination Characterization.

Provide a description of the site based on results of previous studies, site history, and prior site uses and activities. Describe the location topography and approximate size of the site, the on-site job tasks to be performed, and the duration of planned activities. Compile a summary of hazardous substances and safety and health hazards likely to be encountered on site. Include ordnance and chemical/biological names, concentration ranges, media in which found, locations on-site, and estimated quantities/volumes to be impacted by site work. The site descriptions shall be based on results of previous studies and the history of prior site uses and activities conducted under Task 1 of this Scope of Work.

7.4 Hazard Assessment and Risk Analysis. In the SSHP, the A-E shall provide a complete description of the work to be performed at each site. The A-E shall identify the chemical, physical, safety, and biological hazards that may be encountered for each task and/or site operation to be performed. Each task/operation is to be discussed separately. Routes and sources of exposure for chemical hazards anticipated onsite along with chemical/biological names, concentration ranges, media in which found, locations on-site, estimated quantities/volumes, and the applicable regulatory standards (PELs) and recommended protective exposure levels (TLVs) shall be provided. Action levels shall be specified and justified for implementation of engineering controls/and or work practice controls, for emergency evacuation

of on-site personnel, and for the prevention and/or minimization of public exposure to hazards created by on-site activities.

7.5 Accident Prevention. The SSHP may serve as the Accident Prevention Plan provided it addresses all content requirements of both 29 CFR 1910.120 and EM 385-1-1 (Appendix A). All Accident Prevention Plan elements required by EM 385-1-1, Appendix A, but not specifically covered by these elements shall be addressed in this section of the SSHP. Daily safety and health inspections shall be conducted to determine if site operations are conducted IAW the approved plans and contract requirements.

7.6 Training. All general site workers shall receive 40 hours of initial off-site health and safety training (24 hours for non-exposed on-site personnel) which is relevant to hazardous waste site activities, plus three (3) days of supervised field experience (one (1) day for non-exposed personnel), in compliance with 29 CFR 1910.120 (e). In addition, site-specific, supervisory, refresher, visitor training, and training IAW the aforementioned regulation and training IAW DA PAM 385-61 shall be addressed. The content, duration, and frequency of all training shall be described. The A-E shall provide written certification to the CO that the required training has been received by the A-E's affected personnel prior to engaging in on-site activities.

7.7 Personal Protective Equipment. A written Personal Protective Equipment (PPE) Program shall be provided in the SSHP. The program shall address all the elements of 29 CFR 1910.120 (g) (5), 29 CFR 1910.132, and 29 CFR 1910.134. Minimum levels of protection necessary for each task/operation to be performed at each site based on probable site conditions, potential occupational exposure (including heat and cold stress) and the hazard assessment/risk analysis required above. Include specific types and materials for protective clothing and respiratory protection. Establish and justify upgrade/downgrade criteria

based upon the action levels as required. As a minimum and as appropriate, the following emergency and first aid equipment shall be immediately available for on-site use: (1) First aid equipment and supplies approved by the consulting physician; (2) Emergency eyewashes/showers which comply with ANSI Z-358.1; (3) Emergency use respirators (worst case appropriate); (4) Spill control materials and equipment; and (5) Fire extinguishes (specify type, size and locations).

7.7.1 A-E's PPE shall comprise that equipment necessary to adequately protect the personnel working on or visiting any site under the A-E's jurisdiction. The A-E shall describe in detail and provide appropriate PPE to ensure workers and government employees are not exposed to levels greater than the action level for identified hazards for each operation stated for each work zone. The level of protection shall be specified for each operation and shall be in compliance with all requirements of 29 CFR 1910 and DA Pam 385-61. The A-E shall provide, maintain and recommend PPE levels.

7.7.2 The PPE levels will match those levels deemed adequate by DA Safety for the agent or contaminate suspected. Where possible, these levels will coincide with appropriate OSHA and NIOSH PPE levels. Where OSHA and DA Safety levels do not agree, a final determination as to acceptable level will be made by DA. The appropriate PPE level shall be recommended by the A-E and approved by the Government for this project. The A-E shall prepare and submit a PPE matrix for DA Safety approval for Level A PPE. A sample format of the PPE matrix is available from the CEHNC Safety Office.

7.8 Medical Surveillance. All personnel performing on-site activities shall participate in an ongoing medical surveillance program meeting the requirements of 29 CFR 1910.120, ANSI Z-88.2 and DA Pam 40-173, as applicable. The medical examination protocols and results shall be overseen by a licensed physician

who is certified in Occupational Medicine by the American Board of Preventive Medicine, or who by necessary training and experience is board eligible. Minimum specific exam content and frequency based on probable site conditions, potential occupational exposures and required protective equipment shall be specified. A written medical opinion from the examining physician as to fitness to perform the required work shall be made available to the CO upon request for any site employee.

7.9 Environmental and Personal Monitoring. Where it has been determined that there may be employee exposures to on- and/or off-site migration potentials of hazardous airborne concentrations of hazardous substances, appropriate direct reading (real-time) air monitoring' and integrated (time weighted average) air sampling shall be conducted in accordance with applicable federal, state, and local requirements. Both air monitoring and air sampling must accurately represent concentration of air contaminants encountered on and leaving the site. The types and frequency of monitoring/sampling to be performed shall be specified for on-site and perimeter, where applicable. Where perimeter monitoring is not deemed necessary, provide suitable justification for its exclusion. When applicable, NIOSH and/or EPA sampling and analytical methods shall be used. Personal samples, where necessary, shall be analyzed by laboratories successfully participating in and meeting the requirements of the American Industrial Hygiene Association's (AIHA) Proficiency Analytical Testing (PAT) or laboratory Accreditation Program. Include, as appropriate, real-time (direct-read) monitoring and integrated Time Weighted Average sampling for specific contaminants of concern. Meteorological, noise, and radiation monitoring shall be conducted as needed depending upon the site hazard assessment. All monitoring and sampling protocol shall be specified to include instrumentation to be used and calibration of

instruments. All monitoring results shall be compared to action levels to determine the need for corrective actions. CWM monitoring shall use CBDCOM protocols. Action levels will be in accordance with AR 385-61 and DA PAM 385-61. The A-E shall coordinate with CBDCOM through CEHNC.

7.10 Heat/Cold Stress Monitoring. Heat and cold stress monitoring protocols, as appropriate, shall be described in detail. Work/rest schedules shall be determined based upon ambient temperature, humidity, wind speed (wind chill), solar radiation intensity, duration and intensity of work and protective equipment ensembles. Minimum required physiological monitoring protocols which will affect work schedules shall be developed. In cases where impervious clothing is worn, the NIOSH/OSHA/USCG/EPA "Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities" protocol for prevention of heat stress shall be followed and heat stress monitoring shall commence at temperatures of 70 degrees Fahrenheit and above. Where impervious clothing is not worn, the ACGIH heat stress standard (TLV) shall be used. For cold stress monitoring to help prevent frostbite and hypothermia, the ACGIH cold stress standard shall be referenced and followed, as a minimum.

7.11 Site Control. The A-E shall describe site control measures which include site maps, the work zone delineation and access points, the on/off-site communication system, general site access controls, and security procedures (physical and procedural).

7.12 Personnel and Equipment Decontamination. The A-E shall develop and specify decontamination procedures IAW 29 CFR 1910.120, AR 385-61 and DA PAM 385-61 for personnel, personal protective equipment, monitoring instruments, sampling equipment, and heavy equipment. Decontamination procedures shall address specific measures to ensure that contamination is confined to the

work site. Necessary facilities and their locations, detailed standard operating procedures, frequencies, supplies, and materials to accomplish decontamination of site personnel and to determine adequacy of equipment decontamination shall be discussed.

7.13 Emergency Response and Contingency Procedures (On-site and Off-site). An Emergency Response Plan as required by 29 CFR 1910.120 and DA PAM 50-6 shall be developed and implemented. As a minimum it shall address the following elements: (1) Pre-emergency planning and procedures for reporting incidents to appropriate Government agencies for potential chemical exposure, personal injuries, fire/explosions, environmental spills and releases, discovery of radioactive materials; (2) personnel roles, lines of authority, communications; (3) posted instructions and list of emergency contacts: physician, nearby notified medical facility, fire and police departments, ambulance service, state/local/federal environmental agencies, CIH, and CO; (4) emergency recognition and prevention; (5) site topography, layout and prevailing weather conditions; (6) criteria and procedures for site evacuation (emergency alerting procedures/ employee alarm system, emergency PPE and equipment, safe distance, place of refuge, evacuation routes, site security and control; (7) specific procedures for decontamination and medical treatment of injured personnel; (8) route maps to nearest pre-notified medical facility; (9) criteria for initiating community alert program, contacts and responsibilities; and (10) critique of emergency responses and follow-up. Material Safety Data Sheets (MSDS) for each hazardous substances anticipated to be encountered on site shall be made accessible to site personnel at all times and shall be submitted in an appendix to the SSHP.

7.14 Standing Operating Procedures, Engineering Controls and Work Practices. The A-E shall develop standing operating procedures to protect field personnel, prevent accidents,

minimize hazards, and to take action to correct hazards where necessary. Site rules and prohibitions for safe work practices shall be discussed and shall include such topics as use of the buddy system, smoking restrictions, material handling procedures, confined space entry, excavation safety, physiological and meteorological monitoring for heat/cold stress, illumination, sanitation, and daily safety inspections, etc. This list of topics is not intended to be all inclusive.

7.15 Logs, Reports and Record Keeping. Record keeping procedures for training logs, daily safety inspection logs, employee/visitor registers, medical surveillance records and certifications, air monitoring results and personal exposure records shall be specified. All personnel exposure and medical monitoring records shall be maintained IAW applicable OSHA standards, CFR 1904, 1910, and 1926. The A-E shall develop, retain, and submit training logs, daily safety inspection logs as part of the daily QC Reports, employee/visitor registration and medical opinions/certifications as part of the final contract file. All recordable accidents/injuries/illnesses shall be reported to the CO immediately. A completed ENG 3394, Accident Investigation Report, shall be submitted within two working days IAW AR 385-40 and USACE Supplement 1 to that regulation.

8.0 CHEMICAL DATA and LABORATORY REQUIREMENTS

8.1 Quality Assurance Project Plan (QAPP). The A-E shall prepare the QAPP. The QAPP shall describe the sampling and analyses, quality assurance and quality control methods, equipment, evaluations, reports, and procedures as required for the work specified in this SOW. The plan shall describe field and laboratory procedures. The plan shall clearly describe how the A-E shall ensure that sample integrity and chain of custody of all samples are not compromised prior to delivery to the .

laboratory, and should describe the procedures which will be used to document and report precision, accuracy, and completeness of data results. The plan shall be a brief and concise description of the field and laboratory work required. Previously prepared work plans for similar type of work shall be used as much as possible in the preparation of the plan. The data quality and quality control applies to both the field and laboratory efforts. Results of the field and laboratory controls shall be evaluated and placed in the analytical data submittal, and the draft and final Engineering Reports. The A-E shall provide the laboratory QA/QC plan as an appendix to the QAPP. The plan shall address each requirement as identified in ER 1110-1-163 (Reference 10.12).

8.2 Laboratory Qualifications. The analytical laboratory used by the A-E for Contaminants of Concern (COC) analysis must be validated or certified by the Corps of Engineers' Missouri River Division (CEMRD) and ERDEC and must have the capability to perform the analytical methods required by this SOW. The laboratory shall be an EPA contract lab or be familiar with the Contract Laboratory Program (CLP) requirements and can perform CLP work.

8.3 Coordination with Government Quality Assurance Laboratory. The A-E must provide coordination and quality assurance samples (collected and transported) to the Government Quality Assurance (GQA) lab. Each field control sample collected shall be divided equally, one portion sent to the GQA lab and the remainder sent to the A-E's lab. GQA samples include all sample matrices and analysis parameters. The Government will identify the GQA laboratory.

8.4 Data Reporting Requirements. The A-E shall provide the following data reporting elements: sample ID, sample receipt, organic and inorganic reporting, internal quality control reporting (lab blanks, surrogate spike samples, lab duplicates or

matrix spikes) and field duplicates and blanks. Data shall be provided IAW USACE requirements and USEPA requirements. These data shall be included in the raw data submittal as well as in electronic form in the engineering reports. The A-E laboratory must hold and make available all project raw data for a period of five years after completion of this contract. The A-E must validate all the data. Complete data validation shall be performed on 10% of the sample analysis packages.

8.4.1 Minimum Raw Data Reporting Requirements:

8.4.1.1 Sample IDs. The A-E shall prepare a tabular presentation which matches contract laboratory sample IDs to QA laboratory sample IDs. This table shall identify all Field Duplicates and Field Blanks (including rinsates and trip blanks) as such. This table shall also match all rinsates with their corresponding field samples as well as matching each trip blank with the samples that accompanied it during shipment.

8.4.1.2 Sample Receipt. The A-E shall complete and report a "Cooler Receipt Form" for all shipments for purposes of noting problems in sample packaging, chain-of-custody, and sample preservation. An example form is available from CEMRD-ED-GL.

8.4.1.3 General Organic and Inorganic Reporting. For each analytical method run, the A-E shall report all analytes for each sample as a detected concentration or as less than the specific limits of quantitation. Generally, all samples with out-of-control spike recoveries being attributed on matrix interferences shall be designated as such. All soil/sediment and solid waste samples shall be reported on a dry-weight basis with percent moisture also reported. The A-E shall also report dilution factors for each sample as well as the date of extraction (if applicable) and date of analysis.

8.4.1.4 Internal Quality Control Reporting. At a minimum, internal quality control samples shall be analyzed at rates

specified in the specific methods or as specified in the SOW if higher rates are required to meet project specific Data Quality Objectives.

8.4.1.4.1 Laboratory Blanks (Method Blanks and Instrument Blanks). All analytes shall be reported for each laboratory blank. All nonblank sample results shall be designated as corresponding to a particular laboratory blank in terms of analytical batch processing.

8.4.1.4.2 Surrogate Spike Samples. Surrogate spike recoveries shall be reported with all organic method reports where appropriate (i.e., when the method requires surrogate spikes). The report shall also specify the control limits for surrogate spike results as well as the spiking concentration. Any out-of-control recoveries (as defined in the specified method) shall result in the sample being rerun (both sets of data are to be reported) or data being flagged.

8.4.1.4.3 Matrix Spike Samples. Matrix Spike Recoveries shall be reported for all organic and inorganic analyses. All general sample results shall be designated as corresponding to a particular matrix spike sample. The report shall indicate what field sample was spiked even if it was not a Corps of Engineers project sample. The report shall also specify the control limits for matrix spike results for each method for each matrix.

8.4.1.4.4 Laboratory Duplicates and/or Matrix Spike Duplicate Pairs. Relative percent difference shall be reported for all duplicate pairs as well as analyte/matrix specific control limits.

8.4.1.4.5 When run for internal quality control, Laboratory Control Standard's results shall be reported with the corresponding field sample data. Control limits for LCSs shall also be specified.

8.4.1.5 Field Duplicates and Field Blanks. These samples shall be identified as such by the A-E and reported as any other field sample. Relative percent differences shall be reported for all field duplicate pairs.

8.5 Data Quality. The A-E shall provide a data quality level that is compatible with an RI/FS study. The A-E shall provide quality control of the various analytical tasks performed.

9.0 PUBLIC AFFAIRS

The A-E shall not publicly disclose any data generated or reviewed under this contract. The A-E shall refer all requests for information concerning the site condition to the CEHNC Project Manager. Reports and data generated under this task order are the property of the Department of Defense and distribution to any other sources by the A-E, unless authorized by the CO, is prohibited.

10.0 REFERENCES

10.1 "Draft Archives Search Report, Fort McClellan, Anniston, Alabama," U.S. Army Corps of Engineers, St. Louis District, June 1998.

10.2 "Final Environmental Baseline Survey, Vols. I & 2, Fort McClellan, Alabama," ESE, January 1998.

10.3 "Remedial Investigation Report of Fort McClellan, Vol. I," SAIC, August 1995.

10.4 "Installation-Wide Safety and Health Plan, Fort McClellan, Alabama," IT Corp., October 1997.

10.5 "Task Order 11, Enhanced Preliminary Assessment, Fort McClellan, Alabama-Final Report," Roy F. Weston, 1990.

10.6 "U.S. Army Corps of Engineers Safety and Health Requirements Manual," U.S. Army Engineer Manual EM 385-1-1, September 1996.

10.7 "Safety Concepts for Unexploded Ordnance," ETL 385-1-1, Huntsville Division, U.S. Army Corps of Engineers, 16 December 1992.

10.8 "Environmental Chemistry and Fate of Chemical Warfare Agents." Southwest Research Institute. Prepared for Corps of Engineers, Huntsville Division, March 3, 1994.

10.9 "Field Manual on Environmental Chemistry and Fate of Chemical Warfare Agents." Southwest Research Institute. Prepared for Corps of Engineers, Huntsville Division, July 7, 1994.

10.10 "Accident Reporting and Records" with USACE Supplement, AR 385-40, 1 November 1994 w/chgs.

10.11 "Ammunition and Explosive Standards," TM 9-1300-206, 30 August 1973 w/chgs.

10.12 "Safety and Occupational Health Document Requirements for Hazardous, Toxic, and Radioactive Waste (HTRW) and Ordnance and Explosive Waste (OEW) Activities," Engineer Regulations 385-1-92, 18 March 1994.

10.13 "Chemical Data Quality Management for Hazardous Waste Remedial Activities," Engineer Regulation 1110-1-263, 1 Oct 90.

10.14 "Occupational Safety and Health Administration Standards," (29 CFR 1910 and 1926).

10.15 "Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities," NIOSH/OSHA/USCG/EPA, October 1985.

10.16 "Emergency Eyewash and Shower Equipment," ANZI Z-358.1, 1990.

10.17 "Test Methods for Evaluating Solid Wastes," USEPA Pub. No. SW-846, Latest Ed.

10.18 "Annual Book of ASTM Standards," Current edition.

10.19 "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA," EPA/540/G-89/004, October 1988.

10.20 "Chemical Quality Management -- Toxic and Hazardous," U.S. Army Engineering Regulation No. ER 1110-1-163, Current Edition.

10.21 "CERCLA Compliance With Other Laws Manual," Parts I and II, USEPA, 1988b.

10.22 "Methods for Evaluation the Attainment of Cleanup Standards," Volume I - Soils and Solid Media, USEPA, 1989e.

10.23 "Methods for the Determination of Organic Compounds in Drinking Water," USEPA, December 1988.

10.24 "Cost Engineering Policy," U.S. Army Engineering Regulation No. 1110-3-1301, April.

10.25 Code of Federal Regulations, 40 CFR, Parts 190-299. latest edition.

10.26 Code of Federal Regulations, [n.d.] "Hazardous Waste Operations and Emergency Response." CFR 1910.120, Final Rule.

10.27 "Minimum Chemistry Data Reporting Requirements for DERP and Superfund HTW Projects." Memorandum, CEMRD-ED-GL. August 1989.

10.28 "Compendium of Superfund Field Operations Methods," USEPA, 1987.

10.29 "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA," USEPA 540/g89/004, October 1988.

10.30 "Army Toxic Chemical Agent Safety Program," AR 385-61, 28 August 1985 w/chgs.

10.31 "Toxic Chemical Agent Safety Standards," DA PAM 385-61.

10.32 "Chemical Accident or Incident Response and Assistance (CAIRA) Operations," DA PAM 50-6, 17 May 1991 w/chgs.

10.33 "Occupational Health Guidelines for Evaluation and Control of Occupational Exposure to Mustard Agents H, HD, and HT," DA PAM 40-173, 30 August 1991 w/chgs.

10.34 "Chemical Surety," AR 50-6, 1 February 1995.

10.35 "Ammunition and Explosives Safety Standards," DOD 6055.9-STD, 30 October 1992.

10.36 "Risk Assessment Guidance for Superfund (RAGS)," Vols I and II, US Environmental Protection Agency (EPA). 1989b.

10.37 "General Information on EOD Disposal Procedures," TM 60A-1-1-31, 19 January 1982 w/chgs.

10.38 "Site Summary and Project Summary Sheets for DERP-FUDS Site No. I04AL005700," CESAM-PD-E, 28 April 1992.

10.39 "Ordnance and Explosives Cost Estimating Risk Tool (OE Cert) Standing Operating Procedure (SOP)." DRAFT. CEHNC 1115-3-86, August 1996.

Appendix A

1.1 SITE VISIT and RECORDS REVIEW. Under the previous task order, the A-E shall make a site visit, review pertinent maps, records, and documents. The purpose of this task is to permit those members of the A-E with direct project responsibility to gain necessary information about site conditions. A site visit is authorized to assist in preparing the work plan. The site visit team shall not exceed four (4) persons and shall include one (1) Senior UXO Supervisor. The A-E will coordinate the site visit with the Contracting Officer (CO) 10 days prior to arriving on site. The A-E will prepare an abbreviated SSHP and submit it to the CO for review and approval prior to the visit. The A-E shall ensure that the site visit is fully coordinated and that all members of the site visit team maintain compliance with the abbreviated SSHP.

1.2 PREPARE WORK PLANS. Under the previous task order the A-E shall prepare and submit a work plans for this project. The work plans shall describe in detail the site background and history, investigation objectives, all proposed investigative activities, monitoring, equipment, procedures, personnel, and schedule. The work plans shall propose site locations and the anticipated work that shall be conducted. The work plans shall include the following sub-plans and standing operating procedures (SOP's).

1.2.1 Health and Safety Program (HSP). Under the previous task order the A-E shall develop and maintain a Health and Safety Program in compliance with the requirements of OSHA standard 29 CFR 1910.120(b)(1) through (b)(4). The A-E will submit to the CO written certification that the HSP has been developed and implemented and the plans shall be made available upon request. The A-E shall develop a Site-Specific Safety and Health Plan (SSHP) IAW the requirements of Paragraph 7.0 of this SOW. The

A-E shall include exposure concerns associated with this SOW, an Air Monitoring Plan and a Personnel and Equipment Decontamination Plan. An abbreviated SSHP is not acceptable for the base document. The A-E will submit the SSHP to the CO for approval prior to beginning any field work described in this task. He will perform all work IAW the approved plan. Due to the inherent risk of UXO work, UXO related activities shall be limited to a 40-hour workweek (either five 8-hour or four 10-hour days). UXO personnel shall not perform UXO-related tasks for more than 10 hours per day.

1.2.2 Site Mobilization/Demobilization and Support Plan.

As part of the Work Plans the A-E shall prepare a plan that details mobilization/demobilization activities. These activities shall be those actions necessary to prepare the site for work prior to the arrival of the work crews, and those actions necessary to shut down the site at demobilization. Such activities shall include but are not limited to communications, power to site office(s), arrangement for office(s), sanitary requirements, lodging arrangements, explosive acquisition and storage, and demolition area preparation.

1.2.3 Conventional Safe Holding Area (SHA) Plan. As part of the Work Plans the A-E shall plan for a Safe Holding Area on the site. The A-E shall include provisions for fire fighting, security, and other requirements for establishing and operating a Safe Holding Area. The SHA shall be designed to safely store explosives needed to perform demolition work and to safely store recovered conventional ordnance awaiting destruction.

1.2.4 PM Non-stockpile Plans. The A-E shall, on concurrence with the CO, assist the Project Manager of Non-stockpile (PMNS) in developing plans for the following tasks:

- Recovered CWM Interim Holding Facility Plan
- Recovered CWM Transportation Plan
- Recovered CWM Destruction Plan

The A-E shall, on concurrence with the Contracting Officer, be prepared to assist in these Tasks as needed.

1.2.5 Intrusive Excavation Plan. The A-E shall prepare and submit an intrusive excavation plan. This portion of the work plan shall propose methods for excavating soil down to the anomalies as defined in the geophysical report as well as discussions of equipment, Personnel Protective Equipment (PPE), materials, personnel, air monitoring, and procedures to be used during intrusive excavations.

1.2.6 Scrap Monitoring and Disposal Plan. A-E shall in conjunction with CBDCOM develop and propose a plan for the monitoring and disposal of all recovered scrap from intrusive operations in the chemical areas. This plan shall consider requirements for monitoring, shall show alternatives for scrap disposal, and shall propose the safest and most cost effective methods. Items determined to be from CWM operations shall be placed in a sealed box or container, by the A-E, and heated to 70 degrees F. Air samples shall be collected and analyzed. If the item contains any solid or liquid residue, a sample shall be collected and analyzed in accordance with the Chemical Data, Laboratory and Field Work Sampling Plan. A soil sample shall be collected from the precise location where the item was recovered and analyzed accordingly. If results of the air, soil, and residue sampling indicate no contamination, the A-E shall make provisions for disposal. The A-E shall recommend the Hazardous and Toxic Waste (HTW) receiver and packaging and transport methodology. If the items are found to still have residual chemical agent contamination, they will be decontaminated by the A-E and reinspected until no contamination is found. The A-E shall develop all necessary plans for these actions. Other items, i.e., ferrous metal, fuzes, and OE scrap, shall be collected and disposed of locally as scrap after certification that the items are free of explosive residue. In addition the

A-E shall furnish the following statement: "I certify that the property listed hereon has been inspected by me, and to the best of my knowledge and belief, contains no items of a dangerous nature." The Senior UXO Supervisor shall sign the certificate.

1.2.7 Quality Control Plan. Items addressed shall include, as a minimum:

- (1) equipment testing and calibration,
- (2) performing and documenting QC field inspections,
- (3) monitoring proper functioning of all electronic equipment, and
- (4) OE identification briefings.

1.2.8 Environmental Protection Plan. A site specific Environmental Protection Plan shall include all coordination with federal, state, and local environmental agencies. Endangered/threatened species, archaeological sites, wetlands, and other environmental resources that may affect this project shall be included in this plan. Grids that impact environmental sensitive resources shall be relocated as a priority in mitigation. The plan shall address mitigation measures to be taken to support the ordnance investigation if grids cannot be relocated.

1.2.9 Property and Equipment Plan (PEP). The A-E shall prepare and submit a detailed PEP describing the equipment to be employed while performing all necessary operations. The PEP shall describe and quantify (1) field equipment (such as site trailer, track hoes, back hoes, trucks, bulldozers, front-end loaders, chain saws, magnetometers, etc.), and (2) office equipment (such as computer/printers, telefax, copier, 2-way radios, cam-corder, telephones, etc.), and (3) consumable supplies (both office and field) intended to be used. The A-E shall describe in the PEP the source and rental/acquisition costs for all field and office equipment and consumable supplies. The PEP will contain three quotes for each piece of field and office equipment, and the PEP must indicate that the vendor with the

lowest price quote was used for the rental acquisition. The A-E shall indicate in the PEP when rental costs exceed acquisition costs for a particular piece of equipment over the life of the project. In these instances, the CO may direct the A-E to purchase the equipment. After CO approval of the Work Plans/PEP, additional field/office equipment and consumable supplies in excess of \$1,000 may not be rented/acquired without CO approval.

1.2.10 Work, Data, and Cost Management Plan (WDCMP). The A-E shall prepare and submit a WDCMP which describes how he will manage and accomplish the work. The WDCMP shall contain a schedule for accomplishing of all the tasks. The schedule shall contain milestones for delivery of all deliverables and their associated costs, show the task components in their relative chronological positions, and state the intervals between milestones in terms of working days following the previous events. More detailed information in the WDCMP shall also consist of the organization structure, the assignment of functions, duties and responsibilities, and functional relationships among organizational elements that will participate in accomplishing the tasks.

1.2.11 Medical Training and Support Plan. A-E shall provide alternatives for medical support available in the area. The A-E shall use DA Pam 50-6 and DA Pam 40-173, as guides for required training and support. Capabilities for support by local medical facilities shall be evaluated as a part of this task. The A-E shall recommend alternatives for medical support after researching the availability of local support. This shall include but is not limited to, paramedics, hospitals, and ambulance or helicopter service for patient transport.

1.2.12 Protective Action Plan. This plan is prepared by the Mobile District. The development of this plan requires in-put and coordination with CEHNC, CBDCOM, and PMNS. This plan shall include, but is not limited to, evacuation procedures for

civilian personnel, reimbursement of expenses for evacuees, the Maximum Credible Event (MCE), the downwind hazard calculations, and the No Significant Events (NOSE) distance.

1.2.13 Chemical Data, Laboratory and Field Work Sampling Plan. The A-E shall describe the locations and quantities of soil samples to be taken, the sampling methods to be used, and the equipment to be used. This plan shall also include the number of samples of each matrix to be taken, the specific chemical parameters to be analyzed for, standard EPA SW 846 methods or Government-approved methods for chemical warfare materiel analysis, and the number of analyses to be performed. In the absence of analytical methods for chemical agent degradation products, the A-E shall identify and recommend analytical methods used in the commercial chemical surety laboratories and shall include the associated detection limits of the matrix. A complete copy of the chemical agent and chemical agent degradation products shall be included in the work plan with the associated detection limits. The U.S. Army Chemical, Biological Defense Command (CBDCOM) will provide on-site screening of samples prior to shipment of the samples from the site. Edgewood Research, Development, and Engineering Center (ERDEC) shall conduct chemical agent and chemical agent degradation products analysis.

1.2.14 Geophysical Investigations Plan. Geophysical investigations will be a major part of the site characterization for this project. The geophysical investigations shall be managed by a qualified geophysicist (i.e., an individual with a degree in geophysics, geology, geological engineering, or closely related field, and who has a minimum of five years of directly related geophysical experience).

1.2.14.1 It is the responsibility of the A-E to select and justify appropriate geophysical methods, equipment, and personnel

for use at the site. This shall be presented in the work plan and approved by the Contracting Officer prior to any field work.

1.2.14.2 As part of the work plan the A-E shall prepare a site-specific Geophysical Investigation-Plan that describes and justifies proposed equipment, methods, personnel and procedures for accomplishing geophysical investigations at the site. The geophysical instruments shall be capable of detection in accordance with the following performance goals:

PERFORMANCE GOALS OF GEOPHYSICAL INVESTIGATIONS

$$\log(\text{depth})=1.002 \log(\text{diameter})-1.961$$

Field instruments shall be field tested daily to ensure that they are operating properly. The A-E shall identify in the work plan, for Government approval, the type of inert round or very similar magnetic inert item that shall be planted, and the specified depth. If an instrument does not meet the standard during the daily check, it shall be calibrated, repaired, or replaced.

1.2.14.3 The project will require a site-specific geophysical prove-out test plot that includes both inert OE and scrap of the type and at the depth anticipated within the investigation area for the purpose of evaluating geophysical instruments and developing the standard response for the selected instrument(s), instrument configuration, and techniques. This plot shall be used to determine the adequacy of proposed geophysical instruments to meet project objectives. When the most appropriate instruments for the project are selected and a standard response for those instruments at this project site is developed, this plot will then serve as the geophysical instrument standard response test plot. The site-specific testgrid shall be geophysically mapped in the same detail and with the same procedures as planned for the remaining project area. The Contractor shall evaluate the geophysical data using

each candidate instrument, configuration, and technique to determine the best geophysical investigative technology and instrument for the OE problem and site conditions. As part of the study, the allowable tolerance for both flagging and electronic positional accuracy shall be established and confirmed using locating techniques to be employed during the project geophysical survey. Methods of measuring standard instrument response(s) and the standard response of each instrument shall be established. This study shall create recommendations pertaining to geophysical instruments, techniques, methods, data transfer, and quality control supported by cost and performance, and shall be submitted as a report for approval prior to beginning the geophysical survey. This report shall include a copy of all data for technical review and evaluation. Each instrument, instrument configuration, and crew shall be baselined at the site-specific geophysical test grid to verify that each instrument, instrument configuration, and crew can achieve a result within 10% of the standard response as determined during the geophysical investigation prove-out.

1.2.14.4 The A-E shall prepare and submit a detailed Geophysical Equipment Plan (GEP) describing the equipment to be employed to perform all necessary operations. Subdivisions within the Geophysical Equipment Plan shall include:

Sensors: type of sensor and configuration

Sensor Mobility: type of mobility (e.g., man portable, vehicle towed), speed, special considerations

Data Storage: sensor internal storage, external storage and any special data transfer requirements shall be addressed.

1.2.15 Investigative Derived Waste (IDW) Plan. The A-E shall describe how IDW shall be handled at the site. The plan shall describe if the IDW must be containerized, type of containerization method, sampling and analytical strategy to be utilized, acceptable disposal facilities, site storage and

security, transportation, manifesting, and storage time limits. Regulatory acceptance of the IDW Plan shall be obtained in writing prior to A-E field mobilization.

1.2.16 Community Relations Plan. The A-E shall support preparation of a plan for community relations. The plan shall be prepared by the US Army Corps of Engineers, Mobile District's (CESAM) public affairs personnel and CEHNC.

APPENDIX B
ANALYTICAL DATA PROVIDED BY EDGEWOOD CHEMICAL
AND BIOLOGICAL CENTER, CHAIN OF CUSTODY RECORDS,
AND SCRAP DESTRUCTION CERTIFICATION



**SBCCOM
MONITORING
BRANCH**

**CLEARANCE REPORT
EXTRACTION SAMPLES**

MB-FORM 51 Revision 4 August 2001



Sample # MB010290-M01 **Sample Date** 4/24/2001 **Date Rec'd** 5/4/2001
Sample Type Soil
Sample Name T38-SB1-1-0.6-1 **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010290-M01A

<i>Analyte</i>	<i>Analysis Method</i>	<i>Analyst</i>	<i>Analyst Date</i>	<i>MDL</i>	<i>Result</i>
1,4-Dithiane	GC/MSD	sheinlei	5/7/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
VX				20	ND

Sample # MB010291-M01 **Sample Date** 4/24/2001 **Date Rec'd** 5/4/2001
Sample Type Soil
Sample Name T38-SB1-2-3.5-4.0 **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010291-M01A

<i>Analyte</i>	<i>Analysis Method</i>	<i>Analyst</i>	<i>Analyst Date</i>	<i>MDL</i>	<i>Result</i>
1,4-Dithiane	GC/MSD	sheinlei	5/7/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
VX				20	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010292-M01 **Sample Date** 4/24/2001 **Date Rec'd** 5/4/2001
Sample Type Soil
Sample Name T38-SB2-1-0.6-1
Organization Parsons - AL
POC Jeff Ulmer

Headspace Clearance #
Phone (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010292-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/7/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
VX				20	ND

Sample # MB010293-M01 **Sample Date** 4/24/2001 **Date Rec'd** 5/4/2001
Sample Type Soil
Sample Name T38-SB2-2-3'.5-4.0"
Organization Parsons - AL
POC Jeff Ulmer

Headspace Clearance #
Phone (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010293-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/7/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND
VX				20	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010297-M01 **Sample Date** 4/30/2001 **Date Rec'd** 5/4/2001
Sample Type Soil
Sample Name T31-SB5-2-3.5-4.0 **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010297-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/7/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND

Sample # MB010298-M01 **Sample Date** 5/1/2001 **Date Rec'd** 5/4/2001
Sample Type Soil
Sample Name T31-SB3-1-0.6-1 **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010298-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/7/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND

MB010298-M01B

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD MS	terosso	5/7/2001	200	127%
1,4-Thioxane				200	127%
GB				20	107%
HD				200	128%

MB010298-M01C

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD MSD	sheinlei	5/7/2001	200	161%
1,4-Thioxane				200	160%
GB				20	134%
HD				200	160%

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010299-M01 **Sample Date** 5/1/2001 **Date Rec'd** 5/4/2001
Sample Type Soil
Sample Name T31-SB3-2-3.5-4.0 **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010299-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/7/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND

Sample # MB010300-M01 **Sample Date** 5/1/2001 **Date Rec'd** 5/4/2001
Sample Type Soil
Sample Name T31-SB6-1-0.6-1 **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010300-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/7/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND

Sample # MB010301-M01 **Sample Date** 5/1/2001 **Date Rec'd** 5/4/2001
Sample Type Soil
Sample Name T31-SB6-2-3.5-4.0 **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010301-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/7/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010302-M01 **Sample Date** 5/2/2001 **Date Rec'd** 5/4/2001
Sample Type Soil
Sample Name T31-SB1-1-0.6-1 **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032

Fax (256) 820-8014

Extraction Number(s)

MB010302-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/7/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND

Sample # MB010303-M01 **Sample Date** 5/2/2001 **Date Rec'd** 5/4/2001
Sample Type Soil
Sample Name T31-SB1-2-3.5-4.0 **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032

Fax (256) 820-8014

Extraction Number(s)

MB010303-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/7/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND

Sample # MB010304-M01 **Sample Date** 5/2/2001 **Date Rec'd** 5/4/2001
Sample Type Soil
Sample Name T31-SB2-1-0.6-1 **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032

Fax (256) 820-8014

Extraction Number(s)

MB010304-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/7/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010305-M01 **Sample Date** 5/2/2001 **Date Rec'd** 5/4/2001
Sample Type Soil
Sample Name T31-SB2-2-3.5-4.0 **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010305-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	LF Blank	jschwarz	8/15/2001	200 ND
1,4-Thioxane					200 ND
GB					20 ND
HD					200 ND

Sample # MB010306-M01 **Sample Date** 5/3/2001 **Date Rec'd** 5/11/2001
Sample Type Soil
Sample Name Naylor Field-SS1-1 **Headspace Clearance #** 0105080053-FMC
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010306-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/14/2001	200	ND
1,4-Thioxane					200 ND
GB					20 ND
HD					200 ND
L					200 ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010307-M01 **Sample Date** 5/7/2001 **Date Rec'd** 5/11/2001
Sample Type Soil
Sample Name Naylor Field-SB7-1-0.6"-1' **Headspace Clearance #** 0105080054-FMC
Organization Parsons - AL **Phone** (256) 847-4032
POC Jeff Ulmer **Fax** (256) 820-8014

Extraction Number(s)

MB010307-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/14/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND

Sample # MB010308-M01 **Sample Date** 5/7/2001 **Date Rec'd** 5/11/2001
Sample Type Soil
Sample Name Naylor Field-SB7-2-3.5"-4.0' **Headspace Clearance #** 0105080055-FMC
Organization Parsons - AL **Phone** (256) 847-4032
POC Jeff Ulmer **Fax** (256) 820-8014

Extraction Number(s)

MB010308-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/14/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010309-M01 **Sample Date** 5/7/2001 **Date Rec'd** 5/11/2001
Sample Type Soil
Sample Name Naylor Field-SB3-1-0.6"-1' **Headspace Clearance #** 0105080056-FMC
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010309-M01A

<i>Analyte</i>	<i>Analysis Method</i>	<i>Analyst</i>	<i>Analyst Date</i>	<i>MDL</i>	<i>Result</i>
1,4-Dithiane	GC/MSD	sheinlei	5/15/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND

Sample # MB010310-M01 **Sample Date** 5/7/2001 **Date Rec'd** 5/11/2001
Sample Type Soil
Sample Name Naylor Field-SB3-2-3.5"-4.0' **Headspace Clearance #** 0105080057-FMC
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010310-M01A

<i>Analyte</i>	<i>Analysis Method</i>	<i>Analyst</i>	<i>Analyst Date</i>	<i>MDL</i>	<i>Result</i>
1,4-Dithiane	GC/MSD	sheinlei	5/15/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb **MS = Matrix Spike;**
MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010311-M01 **Sample Date** 5/7/2001 **Date Rec'd** 5/11/2001
Sample Type Soil
Sample Name Naylor Field-SB1-1-0.6"-1' **Headspace Clearance #** 0105080058-FMC
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010311-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/15/2001	200	ND
1,4-Dithiane				200	ND
GB				20	ND
HD				200	ND
L				200	ND

Sample # MB010312-M01 **Sample Date** 5/7/2001 **Date Rec'd** 5/11/2001
Sample Type Soil
Sample Name Naylor Field-SB1-2-3.5"-4.0' **Headspace Clearance #** 0105080059-FMC
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010312-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/15/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010313-M01 **Sample Date** 5/7/2001 **Date Rec'd** 5/11/2001
Sample Type Soil
Sample Name Naylor Field-SB6-1-0.6"-1' **Headspace Clearance #** 0105080060-FMC
Organization Parsons - AL **Phone** (256) 847-4032
POC Jeff Ulmer **Fax** (256) 820-8014

Extraction Number(s)

MB010313-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/14/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND

Sample # MB010314-M01 **Sample Date** 5/7/2001 **Date Rec'd** 5/7/2001
Sample Type Soil
Sample Name Naylor Field-SB6-2-3.5"-4.0' **Headspace Clearance #** 0105080061-FMC
Organization Parsons - AL **Phone** (256) 847-4032
POC Jeff Ulmer **Fax** (256) 820-8014

Extraction Number(s)

MB010314-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/15/2001	200	ND
1,4-Dithiane				200	ND
GB				20	ND
HD				200	ND
L				200	ND

Sample # MB010317-M01 **Sample Date** 5/7/2001 **Date Rec'd** 5/7/2001
Sample Type Soil
Sample Name Naylor Field-SB4-1-0.6"-1' **Headspace Clearance #** 0105080064-FMC
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010317-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/15/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND

Sample # MB010318-M01 **Sample Date** 5/7/2001 **Date Rec'd** 5/7/2001
Sample Type Soil
Sample Name Naylor Field-SB4-2-3.5"-4.0' **Headspace Clearance #** 0105080065-FMC
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010318-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/15/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND

MB010318-M01B

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD Duplicate	sheinlei	5/15/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010315-M01 **Sample Date** 5/7/2001 **Date Rec'd** 5/7/2001
Sample Type Soil
Sample Name Naylor Field-SB2-1-0.6"-1' **Headspace Clearance #** 0105080062-FMC
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010315-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/15/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND

Sample # MB010316-M01 **Sample Date** 5/7/2001 **Date Rec'd** 5/7/2001
Sample Type Soil
Sample Name Naylor Field-SB2-1-3.5"-4.0' **Headspace Clearance #** 0105080063-FMC
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010316-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/15/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010319-M01 **Sample Date** 5/7/2001 **Date Rec'd** 5/7/2001
Sample Type Soil
Sample Name Naylor Field-SB5-1-0.6"-1' **Headspace Clearance #** 0105080066-FMC
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010319-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/15/2001	200	ND
1,4-Dithiane				200	ND
GB				20	ND
L				200	ND
VX				20	ND

Sample # MB010320-M01 **Sample Date** 5/7/2001 **Date Rec'd** 5/7/2001
Sample Type Soil
Sample Name Naylor Field-SB5-2-3.5"-4.0' **Headspace Clearance #** 0105080067-FMC
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010320-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/15/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010321-M01 **Sample Date** 5/7/2001 **Date Rec'd** 5/7/2001
Sample Type Soil
Sample Name Naylor Field-SB10-1-0.6"-1' **Headspace Clearance #** 0105080068-FMC
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010321-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/15/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND

Sample # MB010322-M01 **Sample Date** 5/7/2001 **Date Rec'd** 5/7/2001
Sample Type Soil
Sample Name Naylor Field-SB10-2-3.5"-4.0' **Headspace Clearance #** 0105080069-FMC
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010322-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/15/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010323-M01 **Sample Date** 5/8/2001 **Date Rec'd** 5/8/2001
Sample Type Soil
Sample Name Naylor Field-SB8-1-0.6"-1' **Headspace Clearance #** 0105080078-FMC
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010323-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/15/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND

Sample # MB010324-M01 **Sample Date** 5/8/2001 **Date Rec'd** 5/8/2001
Sample Type Soil
Sample Name Naylor Field-SB8-2-3.5"-4.0' **Headspace Clearance #** 0105080079-FMC
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010324-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/15/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010325-M01 **Sample Date** 5/8/2001 **Date Rec'd** 5/8/2001
Sample Type Soil
Sample Name Naylor Field-SB9-1-0.6"-1' **Headspace Clearance #** 0105080080-FMC
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010325-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/15/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND

Sample # MB010326-M01 **Sample Date** 5/8/2001 **Date Rec'd** 5/8/2001
Sample Type Soil
Sample Name Naylor Field-SB9-2-3.5"-4.0' **Headspace Clearance #** 0105080081-FMC
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010326-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/15/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010327-M01 **Sample Date** 5/8/2001 **Date Rec'd** 5/8/2001
Sample Type Soil
Sample Name Cain Creek-SB5-1-0.6"-1' **Headspace Clearance #** 0105080082-FMC
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010327-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/15/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
VX				20	ND

Sample # MB010328-M01 **Sample Date** 5/8/2001 **Date Rec'd** 5/8/2001
Sample Type Soil
Sample Name Cain Creek-SB5-2-3.5"-4.0' **Headspace Clearance #** 0105080083-FMC
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010328-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/15/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
VX				20	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010329-M01 **Sample Date** 5/8/2001 **Date Rec'd** 5/8/2001
Sample Type Soil
Sample Name Cain Creek-SB3-1-0.6"-1' **Headspace Clearance #** 0105080084-FMC
Organization Parsons - AL **Phone** (256) 847-4032
POC Jeff Ulmer **Fax** (256) 820-8014

Extraction Number(s)

MB010329-M01A

<i>Analyte</i>	<i>Analysis Method</i>	<i>Analyst</i>	<i>Analyst Date</i>	<i>MDL</i>	<i>Result</i>
1,4-Dithiane	GC/MSD	sheinlei	5/15/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

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Sample # MB010330-M01 **Sample Date** 5/8/2001 **Date Rec'd** 5/8/2001
Sample Type Soil
Sample Name Cain Creek-SB3-2-3.5"-4.0' **Headspace Clearance #** 0105080085-FMC
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010330-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/15/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
VX				20	ND

MB010330-M01B

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD Duplicate	sheinlei	5/15/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
VX				20	ND

MB010330-M01C

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD MS	sheinlei	5/15/2001	20	101%
HD				200	102%
VX				20	80%

MB010330-M01D

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD MSD	sheinlei	5/15/2001	20	106%
GD				20	77%
HD				200	107%

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010331-M01 **Sample Date** 5/8/2001 **Date Rec'd** 5/8/2001
Sample Type Soil
Sample Name Cain Creek-SB1-1-0.6"-1'
Organization Parsons - AL **Headspace Clearance #** 0105080086-FMC
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010331-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/15/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
VX				20	ND

Sample # MB010332-M01 **Sample Date** 5/8/2001 **Date Rec'd** 5/8/2001
Sample Type Soil
Sample Name Cain Creek-SB1-2-3.5"-4.0'
Organization Parsons - AL **Headspace Clearance #** 0105080087-FMC
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010332-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	5/15/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
VX				20	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

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**SBCCOM
MONITORING
BRANCH**

**CLEARANCE REPORT
EXTRACTION SAMPLES**
MB-FORM 51 Revision 4 August 2001



Sample # MB010336-M01 **Sample Date** 5/9/2001 **Date Rec'd** 5/25/2001
Sample Type Soil
Sample Name AGENT ID-SB1-1-0.6"-1'
Organization Parsons - AL
POC Jeff Ulmer

**Headspace
Clearance #**
Phone (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010336-M01A

<i>Analyte</i>	<i>Analysis Method</i>	<i>Analyst</i>	<i>Analyst Date</i>	<i>MDL</i>	<i>Result</i>
1,4-Dithiane	GC/MSD	scarter	5/29/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND
VX				20	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010337-M01 Sample Date 5/9/2001 Date Rec'd 5/25/2001

Sample Type Soil

Sample Name AGENT ID-SB1-2-3.5"-4.0'

Organization Parsons - AL

POC Jeff Ulmer

Headspace
Clearance #

Phone (256) 847-4032

Fax (256) 820-8014

Extraction Number(s)

MB010337-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	scarter	5/29/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND
VX				20	ND

MB010337-M01B

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD Duplicate	scarter	5/30/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND
VX				20	ND

MB010337-M01C

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD MS	scarter	5/30/2001	200	78%
1,4-Thioxane				200	78%
GB				20	ND
HD				200	78%
L				200	72%
VX				20	ND

MB010337-M01D

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD MSD	scarter	5/30/2001	200	55%
1,4-Thioxane				200	56%
GB				20	ND
HD				200	56%
L				200	51%
VX				20	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010338-M01 **Sample Date** 5/9/2001 **Date Rec'd** 5/25/2001
Sample Type Soil
Sample Name AGENT ID-SB2-1-0.6"-1' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010338-M01A

<i>Analyte</i>	<i>Analysis Method</i>	<i>Analyst</i>	<i>Analyst Date</i>	<i>MDL</i>	<i>Result</i>
1,4-Dithiane	GC/MSD	scarter	5/29/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND
VX				20	ND

Sample # MB010339-M01 **Sample Date** 5/9/2001 **Date Rec'd** 5/25/2001
Sample Type Soil
Sample Name AGENT ID-SB1-2-3.5"-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010339-M01A

<i>Analyte</i>	<i>Analysis Method</i>	<i>Analyst</i>	<i>Analyst Date</i>	<i>MDL</i>	<i>Result</i>
1,4-Dithiane	GC/MSD	scarter	5/29/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND
VX				20	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

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Sample # MB010340-M01 **Sample Date** 5/9/2001 **Date Rec'd** 5/25/2001
Sample Type Soil
Sample Name AGENT ID-SB4-1-0.6"-1'
Organization Parsons - AL
POC Jeff Ulmer

Headspace Clearance #
Phone (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010340-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	scarter	5/29/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND
VX				20	ND

Sample # MB010341-M01 **Sample Date** 5/9/2001 **Date Rec'd** 5/25/2001
Sample Type Soil
Sample Name AGENT ID-SB4-2-3.5"-4.0'
Organization Parsons - AL
POC Jeff Ulmer

Headspace Clearance #
Phone (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010341-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	scarter	5/29/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND
VX				20	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010342-M01 **Sample Date** 5/10/2001 **Date Rec'd** 5/25/2001
Sample Type Soil
Sample Name AGENT ID-SB3-1-0.6"-1'
Organization Parsons - AL **Headspace Clearance #**
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010342-M01A

<i>Analyte</i>	<i>Analysis Method</i>	<i>Analyst</i>	<i>Analyst Date</i>	<i>MDL</i>	<i>Result</i>
1,4-Dithiane	GC/MSD	scarter	5/29/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND
VX				20	ND

Sample # MB010343-M01 **Sample Date** 5/10/2001 **Date Rec'd** 5/25/2001
Sample Type Soil
Sample Name AGENT ID-SB3-2-3.5"-4.0'
Organization Parsons - AL **Headspace Clearance #**
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010343-M01A

<i>Analyte</i>	<i>Analysis Method</i>	<i>Analyst</i>	<i>Analyst Date</i>	<i>MDL</i>	<i>Result</i>
1,4-Dithiane	GC/MSD	scarter	5/29/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND
VX				20	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010344-M01 **Sample Date** 5/14/2001 **Date Rec'd** 5/25/2001
Sample Type Soil
Sample Name NAYLOR FIELD-SS2-1 **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010344-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	scarter	5/29/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND
VX				20	ND

Sample # MB010345-M01 **Sample Date** 5/16/2001 **Date Rec'd** 5/25/2001
Sample Type Soil
Sample Name T38-SS1-1 **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010345-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	scarter	5/29/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND
VX				20	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010346-M01 **Sample Date** 5/16/2001 **Date Rec'd** 5/25/2001
Sample Type Soil
Sample Name T38-SS2-1 **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010346-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	scarter	5/29/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND
VX				20	ND

Sample # MB010347-M01 **Sample Date** 5/17/2001 **Date Rec'd** 5/25/2001
Sample Type Soil
Sample Name T38-SS3-1 **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010347-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	scarter	5/29/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
L				200	ND
VX				20	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010351-M01 **Sample Date** 5/24/2001 **Date Rec'd** 6/5/2001
Sample Type Soil
Sample Name CAIN CREEK-SB4-2-3.5'-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010351-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/5/2001	20	ND
HD				200	ND
VX				20	ND

Sample # MB010352-M01 **Sample Date** 5/24/2001 **Date Rec'd** 6/5/2001
Sample Type Soil
Sample Name CAIN CREEK-SB6-1-0.6"-1' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010352-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/5/2001	20	ND
HD				200	ND
VX				20	ND

Sample # MB010353-M01 **Sample Date** 5/24/2001 **Date Rec'd** 6/5/2001
Sample Type Soil
Sample Name CAIN CREEK SB6-2-3.5'-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010353-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/5/2001	20	ND
HD				200	ND
VX				20	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010354-M01 **Sample Date** 5/30/2001 **Date Rec'd** 6/5/2001
Sample Type Soil
Sample Name NATIVE SB1-1-3.5'-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010354-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
HD	GC/MSD	jschwarz	6/5/2001	200	ND

Sample # MB010355-M01 **Sample Date** 5/30/2001 **Date Rec'd** 6/5/2001
Sample Type Soil
Sample Name NATIVE SB2-1-3.5'-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010355-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
HD	GC/MSD	jschwarz	6/5/2001	200	ND

Sample # MB010356-M01 **Sample Date** 5/30/2001 **Date Rec'd** 6/5/2001
Sample Type Soil
Sample Name NATIVE SB3-1-3.5'-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010356-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
HD	GC/MSD	jschwarz	6/5/2001	200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010357-M01 **Sample Date** 5/30/2001 **Date Rec'd** 6/5/2001
Sample Type Soil
Sample Name NATIVE SB4-1-3.5'-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010357-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
HD	GC/MSD	jschwarz	6/5/2001	200	ND

MB010357-M01B

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
HD	GC/MSD Duplicate	jschwarz	6/5/2001	200	ND

Sample # MB010358-M01 **Sample Date** 5/31/2001 **Date Rec'd** 6/5/2001
Sample Type Soil
Sample Name RUCKER SB1-1-3.5'-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010358-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
HD	GC/MSD	jschwarz	6/5/2001	200	ND

Sample # MB010359-M01 **Sample Date** 5/31/2001 **Date Rec'd** 6/5/2001
Sample Type Soil
Sample Name RUCKER SB4-1-3.5'-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010359-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
HD	GC/MSD	jschwarz	6/5/2001	200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010360-M01 **Sample Date** 5/31/2001 **Date Rec'd** 6/5/2001
Sample Type Soil
Sample Name RUCKER SB3-1-3.5'-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010360-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
HD	GC/MSD	jschwarz	6/5/2001	200	ND

Sample # MB010361-M01 **Sample Date** 5/31/2001 **Date Rec'd** 6/5/2001
Sample Type Soil
Sample Name RUCKER SB2-1-3.5'-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010361-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
HD	GC/MSD	jschwarz	6/5/2001	200	ND

Sample # MB010362-M01 **Sample Date** 5/31/2001 **Date Rec'd** 6/5/2001
Sample Type Soil
Sample Name 3182-SB1-1-3.5'-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010362-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
HD	GC/MSD	jschwarz	6/5/2001	200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010363-M01 **Sample Date** 5/31/2001 **Date Rec'd** 6/5/2001
Sample Type Soil
Sample Name 3182-SB3-1-3.5'-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010363-M01A

<i>Analyte</i>	<i>Analysis Method</i>	<i>Analyst</i>	<i>Analyst Date</i>	<i>MDL</i>	<i>Result</i>
HD	GC/MSD	jschwarz	6/5/2001	200	ND

Sample # MB010364-M01 **Sample Date** 5/31/2001 **Date Rec'd** 6/5/2001
Sample Type Soil
Sample Name 3182-SB4-1-3.5'-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
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Extraction Number(s)

MB010364-M01A

<i>Analyte</i>	<i>Analysis Method</i>	<i>Analyst</i>	<i>Analyst Date</i>	<i>MDL</i>	<i>Result</i>
HD	GC/MSD	jschwarz	6/5/2001	200	ND

Sample # MB010365-M01 **Sample Date** 5/31/2001 **Date Rec'd** 6/5/2001
Sample Type Soil
Sample Name 3182-SB2-1-3.5'-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010365-M01A

<i>Analyte</i>	<i>Analysis Method</i>	<i>Analyst</i>	<i>Analyst Date</i>	<i>MDL</i>	<i>Result</i>
HD	GC/MSD	jschwarz	6/5/2001	200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010366-M01 **Sample Date** 5/31/2001 **Date Rec'd** 6/5/2001
Sample Type Soil
Sample Name FPD-SB1-1-0.6"-1' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010366-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/5/2001	20	ND
HD				200	ND

Sample # MB010367-M01 **Sample Date** 5/31/2001 **Date Rec'd** 6/5/2001
Sample Type Soil
Sample Name FPD-SB1-2-3.5'-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010367-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/5/2001	20	ND
HD				200	ND

Sample # MB010368-M01 **Sample Date** 5/31/2001 **Date Rec'd** 6/5/2001
Sample Type Soil
Sample Name FPD-SB4-1-0.6"-1' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010368-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/5/2001	20	ND
HD				200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank



**SBCCOM
MONITORING
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**CLEARANCE REPORT
EXTRACTION SAMPLES**

MB-FORM 51 Revision 4 August 2001



Sample # MB010387-M01 **Sample Date** 6/5/2001 **Date Rec'd** 6/7/2001
Sample Type Soil
Sample Name DTA-SB1-1-0.6"-1.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010387-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/7/2001	20	ND
HD				200	ND

Sample # MB010388-M01 **Sample Date** 6/5/2001 **Date Rec'd** 6/7/2001
Sample Type Soil
Sample Name DTA-SB1-2-3.5'-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010388-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/7/2001	20	ND
HD				200	ND

Sample # MB010389-M01 **Sample Date** 6/5/2001 **Date Rec'd** 6/7/2001
Sample Type Soil
Sample Name DTA-SB2-1-0.6"-1.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
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Extraction Number(s)

MB010389-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/7/2001	20	ND
HD				200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010390-M01 **Sample Date** 6/5/2001 **Date Rec'd** 6/7/2001
Sample Type Soil
Sample Name DTA-SB2-2-3.5'-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
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Extraction Number(s)

MB010390-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/7/2001	20	ND
HD				200	ND

Sample # MB010391-M01 **Sample Date** 6/5/2001 **Date Rec'd** 6/7/2001
Sample Type Soil
Sample Name BT-SB13-1-0.6"-1.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010391-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/7/2001	20	ND
HD				200	ND

Sample # MB010392-M01 **Sample Date** 6/5/2001 **Date Rec'd** 6/7/2001
Sample Type Soil
Sample Name BT-SB13-2-3.5'-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010392-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/7/2001	20	ND
HD				200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010396-M01 **Sample Date** 6/5/2001 **Date Rec'd** 6/7/2001
Sample Type Soil
Sample Name BT-SB12-2-3.5'-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010396-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/7/2001	20	ND
HD				200	ND

Sample # MB010397-M01 **Sample Date** 6/5/2001 **Date Rec'd** 6/7/2001
Sample Type Soil
Sample Name BT-SB15-1-0.6"-1.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010397-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/7/2001	20	ND
HD				200	ND

Sample # MB010398-M01 **Sample Date** 6/5/2001 **Date Rec'd** 6/7/2001
Sample Type Soil
Sample Name BT-SB15-2-3.5'-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010398-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/7/2001	20	ND
HD				200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010405-M01 **Sample Date** 6/5/2001 **Date Rec'd** 6/7/2001
Sample Type Soil
Sample Name BT-SB18-1-0.6"-1.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
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Extraction Number(s)

MB010405-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/7/2001	20	ND
HD				200	ND

Sample # MB010406-M01 **Sample Date** 6/5/2001 **Date Rec'd** 6/7/2001
Sample Type Soil
Sample Name BT-SB18-2-3.5'-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010406-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/7/2001	20	ND
HD				200	ND

MB010406-M01B

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD MS	jschwarz	6/7/2001	20	87%
HD				200	92%

Sample # MB010407-M01 **Sample Date** 6/6/2001 **Date Rec'd** 6/8/2001
Sample Type Soil
Sample Name BT-SB1-1-0.6"-1.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
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Extraction Number(s)

MB010407-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/8/2001	20	ND
HD				200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010408-M01 **Sample Date** 6/6/2001 **Date Rec'd** 6/8/2001
Sample Type Soil
Sample Name BT-SB1-2-3.5'-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010408-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/8/2001	20	ND
HD				200	ND

Sample # MB010409-M01 **Sample Date** 6/6/2001 **Date Rec'd** 6/8/2001
Sample Type Soil
Sample Name BT-SB2-1-0.6"-1.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010409-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/8/2001	20	ND
HD				200	ND

Sample # MB010410-M01 **Sample Date** 6/6/2001 **Date Rec'd** 6/8/2001
Sample Type Soil
Sample Name BT-SB2-2-3.5'-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010410-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/8/2001	20	ND
HD				200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010411-M01 **Sample Date** 6/6/2001 **Date Rec'd** 6/8/2001
Sample Type Soil
Sample Name BT-SB17-1-0.6"-1.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
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Extraction Number(s)

MB010411-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/8/2001	20	ND
HD				200	ND

Sample # MB010412-M01 **Sample Date** 6/6/2001 **Date Rec'd** 6/8/2001
Sample Type Soil
Sample Name BT-SB17-2-3.5'-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
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Extraction Number(s)

MB010412-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/8/2001	20	ND
HD				200	ND

Sample # MB010413-M01 **Sample Date** 6/6/2001 **Date Rec'd** 6/8/2001
Sample Type Soil
Sample Name BT-SB4-1-0.6"-1.1' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
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Extraction Number(s)

MB010413-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/8/2001	20	ND
HD				200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010422-M01 **Sample Date** 6/6/2001 **Date Rec'd** 6/8/2001
Sample Type Soil
Sample Name BT-SB7-2-3.5'-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
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Extraction Number(s)

MB010422-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/8/2001	20	ND
HD				200	ND

Sample # MB010423-M01 **Sample Date** 6/6/2001 **Date Rec'd** 6/8/2001
Sample Type Soil
Sample Name BT-SB16-1-0.6"-1.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
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Extraction Number(s)

MB010423-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/8/2001	20	ND
HD				200	ND

Sample # MB010424-M01 **Sample Date** 6/6/2001 **Date Rec'd** 6/8/2001
Sample Type Soil
Sample Name BT-SB16-2-3.5'-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
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Extraction Number(s)

MB010424-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/8/2001	20	ND
HD				200	ND

MB010424-M01B

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD Duplicate	jschwarz	6/8/2001	20	ND
HD				200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010425-M01 **Sample Date** 6/6/2001 **Date Rec'd** 6/8/2001
Sample Type Soil
Sample Name BT-SB8-1-0.6"-1.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010425-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/8/2001	20	ND
HD				200	ND

Sample # MB010426-M01 **Sample Date** 6/6/2001 **Date Rec'd** 6/8/2001
Sample Type Soil
Sample Name BT-SB8-2-3.5'-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
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Extraction Number(s)

MB010426-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/8/2001	20	ND
HD				200	ND

Sample # MB010427-M01 **Sample Date** 6/6/2001 **Date Rec'd** 6/8/2001
Sample Type Soil
Sample Name OTT-SB1-1-0.6"-4.0' **Headspace Clearance #**
Organization Parsons - AL
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Extraction Number(s)

MB010427-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/8/2001	20	ND
HD				200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010430-M01 **Sample Date** 6/6/2001 **Date Rec'd** 6/8/2001
Sample Type Soil
Sample Name OTT-SB2-2-3.5'-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010430-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD	jschwarz	6/8/2001	20	ND
HD				200	ND

MB010430-M01B

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD MS	jschwarz	6/8/2001	20	91%
HD				200	100%

MB010430-M01C

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
GB	GC/MSD MSD	jschwarz	6/8/2001	20	85%
HD				200	90%

Sample # MB010431-M01 **Sample Date** 6/7/2001 **Date Rec'd** 6/8/2001
Sample Type Soil
Sample Name PX-SB2-1-2.5' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010431-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
HD	GC/MSD	jschwarz	6/8/2001	200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010432-M01 **Sample Date** 6/7/2001 **Date Rec'd** 6/8/2001
Sample Type Soil
Sample Name PX-SB1-1-2.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010432-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
HD	GC/MSD	jschwarz	6/8/2001	200	ND

MB010432-M01B

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
HD	GC/MSD Duplicate	jschwarz	6/8/2001	200	ND

Sample # MB010433-M01 **Sample Date** 6/7/2001 **Date Rec'd** 6/8/2001
Sample Type Soil
Sample Name PX-SB3-1-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010433-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
HD	GC/MSD	jschwarz	6/8/2001	200	ND

Sample # MB010434-M01 **Sample Date** 6/7/2001 **Date Rec'd** 6/8/2001
Sample Type Soil
Sample Name PX-SB4-1-3.5' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010434-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
HD	GC/MSD	jschwarz	6/8/2001	200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010435-M01 **Sample Date** 6/7/2001 **Date Rec'd** 6/8/2001
Sample Type Soil
Sample Name POWERS-SB2-1-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010435-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
HD	GC/MSD	jschwarz	6/8/2001	200	ND

Sample # MB010436-M01 **Sample Date** 6/7/2001 **Date Rec'd** 6/8/2001
Sample Type Soil
Sample Name POWERS-SB3-1-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010436-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
HD	GC/MSD	jschwarz	6/8/2001	200	ND

Sample # MB010437-M01 **Sample Date** 6/7/2001 **Date Rec'd** 6/8/2001
Sample Type Soil
Sample Name POWERS-SB4-1-4.0' **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010437-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
HD	GC/MSD	jschwarz	6/8/2001	200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010438-M01 Sample Date 6/7/2001 Date Rec'd 6/8/2001
Sample Type Soil
Sample Name POWERS-SB1-1-4.0' Headspace
Organization Parsons - AL Clearance #
POC Jeff Ulmer Phone (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010438-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
HD	GC/MSD	jschwarz	6/8/2001	200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

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**SBCCOM
MONITORING
BRANCH**

**CLEARANCE REPORT
EXTRACTION SAMPLES
MB-FORM 51 Revision 4 August 2001**



Sample # MB010440-M01 **Sample Date** 6/11/2001 **Date Rec'd** 6/14/2001
Sample Type Soil
Sample Name T38-SS4-1 **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010440-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	cdruyor	6/20/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
Thiodiglycol				250	N/A
VX				20	ND

Sample # MB010441-M01 **Sample Date** 6/11/2001 **Date Rec'd** 6/14/2001
Sample Type Soil
Sample Name T38-SS5-1 **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010441-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	cdruyor	6/20/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
Thiodiglycol				250	N/A
VX				20	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank



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**CLEARANCE REPORT
EXTRACTION SAMPLES
MB-FORM 51 Revision 4 August 2001**



Sample # MB010473-M01 **Sample Date** 6/11/2001 **Date Rec'd** 7/6/2001
Sample Type Soil
Sample Name T38-SS-5-1 **Headspace Clearance #**
Organization Parsons - AL **Phone** (256) 847-4032
POC Jeff Ulmer **Fax** (256) 820-8014

Extraction Number(s)

MB010473-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	7/6/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
VX				20	ND

Sample # MB010474-M01 **Sample Date** 7/5/2001 **Date Rec'd** 7/6/2001
Sample Type Soil
Sample Name T38-SS-8-1 **Headspace Clearance #**
Organization Parsons - AL **Phone** (256) 847-4032
POC Jeff Ulmer **Fax** (256) 820-8014

Extraction Number(s)

MB010474-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	7/6/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
VX				20	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010475-M01 **Sample Date** 6/14/2001 **Date Rec'd** 7/6/2001
Sample Type Soil
Sample Name T38-SS-6-1
Organization Parsons - AL
POC Jeff Ulmer

Headspace Clearance #
Phone (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010475-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	7/6/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
VX				20	ND

Sample # MB010476-M01 **Sample Date** 7/5/2001 **Date Rec'd** 7/6/2001
Sample Type Soil
Sample Name T38-SS-9-1
Organization Parsons - AL
POC Jeff Ulmer

Headspace Clearance #
Phone (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010476-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	7/6/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
VX				20	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010477-M01 **Sample Date** 6/14/2001 **Date Rec'd** 7/6/2001
Sample Type Soil
Sample Name T38-SS-7-1
Organization Parsons - AL
POC Jeff Ulmer

Headspace Clearance #
Phone (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010477-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	7/6/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
VX				20	ND

MB010477-M01B

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD Duplicate	sheinlei	7/6/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
VX				20	ND

Sample # MB010478-M01 **Sample Date** 6/27/2001 **Date Rec'd** 7/6/2001
Sample Type Soil
Sample Name 24A-SS-10-1
Organization Parsons - AL
POC Jeff Ulmer

Headspace Clearance #
Phone (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010478-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	7/6/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb **MS = Matrix Spike;**
MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

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Sample # MB010482-M01 **Sample Date** 6/25/2001 **Date Rec'd** 7/6/2001
Sample Type Soil
Sample Name 24A-SS5-1
Organization Parsons - AL
POC Jeff Ulmer

Headspace Clearance #
Phone (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010482-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	7/6/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND

MB010482-M01B

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD MS	sheinlei	7/6/2001	200	97%
1,4-Thioxane				200	97%
HD				200	97%

MB010482-M01C

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD MSD	sheinlei	7/6/2001	200	92%
1,4-Thioxane				200	93%
HD				200	87%

MB010482-M01D

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD LF Blank	sheinlei	7/6/2001	200	88%
1,4-Thioxane				200	89%
HD				200	85%

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Tuesday, September 04, 2001

Sample # MB010483-M01 Sample Date 6/27/2001 Date Rec'd 7/6/2001
Sample Type Soil
Sample Name 24A-SS8-1
Organization Parsons - AL
POC Jeff Ulmer

Headspace
Clearance #
Phone (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010483-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	sheinlei	7/6/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

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**CLEARANCE REPORT
EXTRACTION SAMPLES
MB-FORM 51 Revision 4 August 2001**



Sample # MB010507-M01 **Sample Date** 7/9/2001 **Date Rec'd** 7/11/2001

Sample Type Soil

Sample Name water tower-SS1-1 (partially burned drum)

Organization Parsons - AL

POC Jeff Ulmer

**Headspace
Clearance #**

Phone (256) 847-4032

Fax (256) 820-8014

Extraction Number(s)

MB010507-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	echadwic	7/11/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
Thiodiglycol				250	ND
VX				20	ND

Sample # MB010508-M01 **Sample Date** 7/9/2001 **Date Rec'd** 7/11/2001

Sample Type Soil

Sample Name water tower-SS2-1 (contents of drum)

Organization Parsons - AL

POC Jeff Ulmer

**Headspace
Clearance #**

Phone (256) 847-4032

Fax (256) 820-8014

Extraction Number(s)

MB010508-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	cdruyor	7/11/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
VX				20	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Tuesday, September 04, 2001

Sample # MB010509-M01 **Sample Date** 7/9/2001 **Date Rec'd** 7/11/2001
Sample Type Soil
Sample Name water tower-SS3-1 (broken drum) **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032

Fax (256) 820-8014

Extraction Number(s)

MB010509-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	cdruyor	7/11/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
VX				20	ND

Sample # MB010510-M01 **Sample Date** 7/9/2001 **Date Rec'd** 7/11/2001
Sample Type Soil
Sample Name water tower-SS4-1 (under removed drum-clom) **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032

Fax (256) 820-8014

Extraction Number(s)

MB010510-M01A

Analyte	Analysis Method	Analyst	Analyst Date	MDL	Result
1,4-Dithiane	GC/MSD	cdruyor	7/11/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
VX				20	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

Sample # MB010511-M01 **Sample Date** 7/9/2001 **Date Rec'd** 7/11/2001
Sample Type Soil
Sample Name water tower-SS5-1 (content of removed drum-c
Organization Parsons - AL **Headspace Clearance #**
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010511-M01A

<i>Analyte</i>	<i>Analysis Method</i>	<i>Analyst</i>	<i>Analyst Date</i>	<i>MDL</i>	<i>Result</i>
1,4-Dithiane	GC/MSD	cdruyor	7/11/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND
VX				20	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb **MS = Matrix Spike;**
MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

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**CLEARANCE REPORT
EXTRACTION SAMPLES
MB-FORM 51 Revision 4 August 2001**



Sample # MB010624-M01 **Sample Date** 6/21/2001 **Date Rec'd** 7/19/2001
Sample Type Soil
Sample Name 24A-SS1-1 **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010624-M01A

<i>Analyte</i>	<i>Analysis Method</i>	<i>Analyst</i>	<i>Analyst Date</i>	<i>MDL</i>	<i>Result</i>
1,4-Dithiane	GC/MSD	sheinlei	7/23/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND

Sample # MB010625-M01 **Sample Date** 6/25/2001 **Date Rec'd** 7/19/2001
Sample Type Soil
Sample Name 24A-SS4-1 **Headspace Clearance #**
Organization Parsons - AL
POC Jeff Ulmer **Phone** (256) 847-4032
Fax (256) 820-8014

Extraction Number(s)

MB010625-M01A

<i>Analyte</i>	<i>Analysis Method</i>	<i>Analyst</i>	<i>Analyst Date</i>	<i>MDL</i>	<i>Result</i>
1,4-Dithiane	GC/MSD	sheinlei	7/23/2001	200	ND
1,4-Thioxane				200	ND
GB				20	ND
HD				200	ND

ND = Not Detected at or above the Method Detection Limit (MDL); MDL is in ppb MS = Matrix Spike;
MSD = Matrix Spike Duplicate; Dup = Duplicate; LF Blank = Lab Fortified Blank; M Blank = Method Blank

CONTRACT JEFF ULMER

4-24-01

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PARSONS ENGINEERING-SCIENCE

CHAIN OF CUSTODY RECORD

ES JOB NUMBER	PROJECT NAME/LOCATION		PRESERVATIVE REQUIRED		SHIP TO:																																										
	Date	Time	Sample Description	Number of Containers	Sample Type	Matrix	Remarks																																								
734643.0400	FORT McCLELLAN AL. CWM EE/CA				EC BC																																										
SAMPLER(S): (Signature) <i>CHRIS YONAT</i>																																															
PENALTY W/ WEIGH 300 <i>small on each 2</i>																																															
ON-SITE MINI-CAMS II																																															
ANALYSES REQUIRED																																															
<table border="1"> <tr> <th>ANALYSES REQUIRED</th> <th>DATE</th> <th>TIME</th> <th>NO. CONTAINERS</th> <th>ANALYSES REQUIRED</th> <th>DATE</th> <th>TIME</th> <th>NO. CONTAINERS</th> </tr> <tr> <td>GC</td> <td>X</td> <td>Y</td> <td>X</td> <td>GC</td> <td>X</td> <td>Y</td> <td>X</td> </tr> <tr> <td>GC</td> <td>X</td> <td>X</td> <td>X</td> <td>GC</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>GC</td> <td>X</td> <td>X</td> <td>X</td> <td>GC</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>GC</td> <td>X</td> <td>X</td> <td>X</td> <td>GC</td> <td>X</td> <td>X</td> <td>X</td> </tr> </table>							ANALYSES REQUIRED	DATE	TIME	NO. CONTAINERS	ANALYSES REQUIRED	DATE	TIME	NO. CONTAINERS	GC	X	Y	X	GC	X	Y	X	GC	X	X	X																					
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GC	X	X	X	GC	X	X	X																																								
GC	X	X	X	GC	X	X	X																																								
4-24-01	1439	T38-SB1-1-0.6'-1'	1	X	Y	X	GC																																								
4-24-01	1458	T38-SB1-2-3.5'-4.0'	1	X	X	X	GC																																								
4-24-01	1515	T38-SB2-1-0.6'-1'	1	X	X	X	GC																																								
4-24-01	1528	T38-SB2-2-3.5'-4.0'	1	X	X	X	GC																																								

Relinquished by: (Signature) <i>Jeff Ulmer</i>																																															
Date/Time: 4/24/01 1520																																															
Received for Laboratory by: <i>Jeff Ulmer</i>																																															
Date/Time: 5/1/01 1100																																															
Remarks: HAND DELIVERED TO EC BC																																															
Airbill#: 51-01 1105																																															
None																																															

Distribution: Original, yellow and pink sheets sent to lab. Gold retained by field personnel. Lab retains original and sends yellow and pink copies with analytical report.

G - Grab
C - Composite

ENGINEERING-SCIENCE CHAIN OF CUSTODY RECORD

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ES JOB NUMBER	PROJECT NAME/LOCATION		PRESERVATIVE REQUIRED		SHIP TO:		
	Date	Time	Sample Description	Number of Containers	Sample Type	Matrix	Remarks
734643.0400	FOET McCLELLAN - CIJM EE/CA				ECBC		
SAMPLER(S): (Signature) CIGNAT <i>[Signature]</i> / <i>[Signature]</i>							
4-30-01	1100	T31-SB4-1-6"-1'	1	X	G C	Soil	
4-30-01	1110	T31-SB4-2-3.5'-4.0'	1	X	G C	Soil	
4-30-01	1124	T31-SB5-1-0.6"-1.0'	1	X	G C	Soil	
4-30-01	1140	T31-SB5-2-3.5'-4.0'	1	X	G C	Soil	

Received by: (Signature) <i>[Signature]</i>							Remarks: HAND DELIVERED TO ECBC
Date/Time: 5/10/01 12:00							Airbill#: _____
Received for Laboratory by: <i>[Signature]</i>							
Date/Time: 5/10/01 11:15							
None							

Distribution: Original, yellow and pink sheets sent to lab. Gold retained by field personnel.
Lab retains original and sends yellow and pink copies with analytical report.

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CHAIN OF CUSTODY RECORD

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2-1-01

ES JOB NUMBER	PROJECT NAME/LOCATION	PRESERVATIVE REQUIRED	ANALYSES REQUIRED	SHIP TO:	Sample Type	Matrix	Remarks	Date	Time	Sample Description	Number of Containers	SAMPLERS: (Signature) CHALS TO MAT
734643.04000	Fort McCallan-CWM - EE/CA			ECBC								
5-7-01	0934				Soil					NAYLOR FIELD-SB7-1-0.6'-1'	1	
5-7-01	0944				Soil					NAYLOR FIELD-SB7-2-3.5'-4.0'	1	
5-7-01	1151				Soil					NAYLOR FIELD-SB3-1-0.6'-1'	1	
5-7-01	1203				Soil					NAYLOR FIELD-SB3-2-3.5'-4.0'	1	
5-7-01	1212				Soil					NAYLOR FIELD-SB1-1-0.6'-1'	1	
5-7-01	1226				Soil					NAYLOR FIELD-SB1-2-3.5'-4.0'	1	
5-7-01	1236				Soil					NAYLOR FIELD-SB6-1-0.6'-1'	1	
5-7-01	1312				Soil					NAYLOR FIELD-SB6-2-3.5'-4.0'	1	
5-7-01	1322				Soil					NAYLOR FIELD-SB2-1-0.6'-1'	1	
5-7-01	1326				Soil					NAYLOR FIELD-SB2-2-3.5'-4.0'	1	
5-7-01	1336				Soil					NAYLOR FIELD-SB4-1-0.6'-1'	1	
5-7-01	1343				Soil					NAYLOR FIELD-SB4-2-3.5'-4.0'	1	
5-7-01	1515				Soil					NAYLOR FIELD-SB5-1-0.6'-1'	1	
5-7-01	1528				Soil					NAYLOR FIELD-SB5-2-3.5'-4.0'	1	
5-7-01	1541				Soil					NAYLOR FIELD-SB10-1-0.6'-1'	1	
5-7-01	1549				Soil					NAYLOR FIELD-SB10-2-3.5'-4.0'	1	
					Soil					NAYLOR FIELD-SB	1	
					Soil					NAYLOR FIELD-SB	1	
Requested by: (Signature) <i>[Signature]</i> Date/Time 5/7/01 1455 Received for Laboratory by: <i>[Signature]</i>												
Remarks: HAND DELIVERED TO ECBC..												
Airbill: 4801 300 NONE												

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G - Grab
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CONTACT: JEFF ULMER

PARSONS

3622

ENGINEERING-SCIENCE CHAIN OF CUSTODY RECORD

ES JOB NUMBER	PROJECT NAME/LOCATION	SAMPLER(S): (Signature)	Date	Time	Sample Description	Number of Containers	PRESERVATIVE REQUIRED		ANALYSES REQUIRED		SHIP TO:		Remarks	
							GC	EC	GC	EC	Sample Type	Matrix		
734613.0400	FOOT McCLELLAN - CWM-EE/CA	<i>Jeff Ulmer</i>										ONSITE MINKAMS II		
			5/24/01	1015	CANN CREEK - SB2 - 1 - 0.6' - 1'	1	X	X			GC	Soil		
			5/24/01	1102	CANN CREEK - SB2 - 2 - 3.5' - 4.0'	1	X	X			GC	Soil		
			5/24/01	1135	CANN CREEK - SB4 - 1 - 0.6' - 1'	1	X	X			GC	Soil		
			5/24/01	1156	CANN CREEK - SB4 - 2 - 3.5' - 4.0'	1	X	X			GC	Soil		
			5/24/01	1224	CANN CREEK - SB6 - 1 - 0.6' - 1'	1	X	X			GC	Soil		
			5/24/01	1252	CANN CREEK - SB6 - 2 - 3.5' - 4.0'	1	X	X			GC	Soil		

Requisitioned by: (Signature)							Date/Time		Received for Laboratory by:		Date/Time		Remarks:	
<i>Jeff Ulmer</i>							5/24/01 1230		<i>Jeff Ulmer</i>		5/24/01 1300		HAND DELIVERED TO ELBC	
<i>Daniel C. Benn</i>							5/30/01 1010		<i>Jeff Ulmer</i>		5/30/01 1100		Airbill#: NONE	

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CONTACT: JEFF ULMER

PACSONS

3615

ENGINEERING-SCIENCE CHAIN OF CUSTODY RECORD

ES JOB NUMBER		PROJECT NAME/LOCATION		PRESERVATIVE REQUIRED		SHIP TO:			
7346430600		FORT McCLELLAN - CWM - EE/CA		11		ECBC			
SAMPLER(S): (Signature)		ANALYSES REQUIRED		Sample Type		Matrix		Remarks	
Date	Time	Sample Description	Number of Containers	FD	GB	Sample Type	Matrix	Remarks	
5-31-01	0833	RUCKER-SB1-1-3.5'-4.0'	1	X		G C SOIL			
5-31-01	0849	RUCKER-SB4-1-3.5'-4.0'	1	X		G C SOIL			
5-31-01	0918	RUCKER-SB3-1-3.5'-4.0'	1	X		G C SOIL			
5-31-01	0930	RUCKER-SB2-1-3.5'-4.0'	1	X		G C SOIL			
5-31-01	1103	3182-SB1-1-3.5'-4.0'	1	X		G C SOIL			
5-31-01	1115	3182-SB2-1-3.5'-4.0'	1	X		G C SOIL			
5-31-01	1129	3182-SB4-1-3.5'-4.0'	1	X		G C SOIL			
5-31-01	1145	3182-SB2-1-3.5'-4.0'	1	X		G C SOIL			
5-31-01	1327	FPD-SB1-1-0.6'-1.0'	1	X		G C SOIL			
5-31-01	1333	FPD-SB1-2-3.5'-4.0'	1	X		G C SOIL			
5-31-01	1338	FPD-SB4-1-0.6'-1.0'	1	X		G C SOIL			
5-31-01	1344	FPD-SB4-2-3.5'-4.0'	1	X		G C SOIL			
5-31-01	1351	FPD-SB1-1-0.6'-1.0'	1	X		G C SOIL			
5-31-01	1355	FPD-SB2-2-3.5'-4.0'	1	X		G C SOIL			
5-31-01	1401	FPD-SB3-1-0.6'-1.0'	1	X		G C SOIL			
5-7-9	1405	FPD-SB3-2-3.5'-4.0'	1	X		G C SOIL			
						G C			
						G C			

Dispatched by: (Signature) *Jeff Ulmer* Date/Time: 5/31/01 1400
 Received for Laboratory by: *Jeff Ulmer*
 Date/Time: 5/31/01 1630
 Remarks: **HAND DELIVERED TO ECBC.**
 Airblift: **NONE**

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CONTACT JEFF ULMER

PARCONS ENGINEERING-SCIENCE CHAIN OF CUSTODY RECORD

3624

PAGE 1 of 2

ES JOB NUMBER	PROJECT NAME/LOCATION	PRESERVATIVE REQUIRED		SHIP TO:	Sample Type	Matrix	Remarks
		11	ANALYSES REQUIRED				
734443 0400	FOOT McCLELLAN - CUM - ES/CA			ECBC			
SAMPLER(S): (Signature) <i>Jeff Ulmer for AHA</i>							
Date	Time	Sample Description	Number of Containers				
6/5/01	0806	DTA-SB1-1-0.6'-1'	1	X	G C	Soil	
6/5/01	0838	DTA-SB1-2-3.5-4.0	1	X	G C	Soil	
6/5/01	0844	DTA-SB2-1-0.6'-1'	1	X	G C	Soil	
6/5/01	0909	DTA-SB2-2-3.5-4.0	1	X	G C	Soil	
6/5/01	1030	BT-SB13-1-0.6'-1'	1	X	G C	Soil	
6/5/01	1037	BT-SB13-2-3.5-4.0	1	X	G C	Soil	
6/5/01	1045	BT-SB14-1-0.6'-1'	1	X	G C	Soil	
6/5/01	1055	BT-SB14-2-3.5-4.0	1	X	G C	Soil	
6/5/01	1104	BT-SB12-1-0.6'-1'	1	X	G C	Soil	
6/5/01	1112	BT-SB2-2-3.5-4.0	1	X	G C	Soil	
6/5/01	1135	BT-SB15-1-0.6'-1'	1	X	G C	Soil	
6/5/01	1143	BT-SB15-2-3.5-4.0	1	X	G C	Soil	
6/5/01	1306	BT-SB11-1-0.6'-1'	1	X	G C	Soil	
6/5/01	1313	BT-SB11-2-3.5-4.0	1	X	G C	Soil	
6/5/01	1326	BT-SB10-1-0.6'-1'	1	X	G C	Soil	
6/5/01	1333	BT-SB10-2-3.5-4.0	1	X	G C	Soil	
6/5/01	1427	BT-SB9-1-0.6'-1'	1	X	G C	Soil	
6/5/01	1437	BT-SB9-2-3.5-4.0	1	X	G C	Soil	
Participated by: (Signature) <i>Jeff Ulmer</i>				Date/Time	Remarks:		
				6/5/01	HAND DELIVERED TO ECBC		
				6/5/01	Airline: NONE		

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CONTACT: C. F. ULMER

PACONS

ENGINEERING-SCIENCE

CHAIN OF CUSTODY RECORD

3602

ES JOB NUMBER	PROJECT NAME/LOCATION	PRESERVATIVE REQUIRED		SHIP TO:	Remarks			
		1/1	ECBC					
Date	Time	Sample Description	Number of Containers	ANALYSES REQUIRED		Sample Type	Matrix	Remarks
				g/g	g/g			
TS4643.0400	Fort McClellan - CUM - EE/CA							
SAMPLERS: (Signature) <i>C.F. Ulmer for HFA</i>								
6/6/01	0818	BT-SB1-1-0.6'-1'	1	X	X	Soil		
6/6/01	0823	BT-SB1-2-3.5'-4'	1	X	X	Soil		
6/6/01	0829	BT-SB2-1-0.6'-1'	1	X	X	Soil		
6/6/01	0836	BT-SB2-2-3.5'-4.0'	1	X	X	Soil		
6/6/01	0843	BT-SB19-1-0.6'-1.0'	1	X	X	Soil		
6/6/01	0848	BT-SB17-2-3.5'-4.0'	1	X	X	Soil		
6/6/01	0905	BT-SB4-1-0.6'-1.0'	1	X	X	Soil		
6/6/01	0913	BT-SB4-2-3.5'-4.0'	1	X	X	Soil		
6/6/01	1033	BT-SB3-1-0.6'-1.0'	1	X	X	Soil		
6/6/01	1037	BT-SB3-2-3.5'-4.0'	1	X	X	Soil		
6/6/01	1046	BT-SB5-1-0.6'-1.0'	1	X	X	Soil		
6/6/01	1049	BT-SB5-2-3.5'-4.0'	1	X	X	Soil		
6/6/01	1056	BT-SB6-1-0.6'-1.0'	1	X	X	Soil		
6/6/01	1059	BT-SB6-2-3.5'-4.0'	1	X	X	Soil		
6/6/01	1105	BT-SB7-1-0.6'-1.0'	1	X	X	Soil		
6/6/01	1113	BT-SB7-2-3.5'-4.0'	1	X	X	Soil		
6/6/01	1238	BT-SB16-1-0.6'-1.0'	1	X	X	Soil		
6/6/01	1242	BT-SB16-2-3.5'-4.0'	1	X	X	Soil		
Date/Time		Received for Laboratory by:		Date/Time		Remarks:		
6/6/01 1450		Daniel Brown		6/6/01 1450		HAND DELIVERED TO ECBC		
6/6/01 1700		Jeff Young		6/6/01 1700		NONE		

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ENGINEERING-SCIENCE

CHAIN OF CUSTODY RECORD

3612

ES JOB NUMBER 734613.0400	PROJECT NAME/LOCATION FORT McLELLAN AL - CWM - EE/CA	PRESERVATIVE REQUIRED		SHIP TO:		
		ANALYSES REQUIRED	Matrix	Remarks	Remarks	
SAMPLER(S) (Signature) <i>Jeff Ulmer for AFA</i>		ONSITE MINICAM				
Date	Sample Description	Number of Containers	Sample Type	Matrix	Remarks	
6/7/01 0833	PX-SB2-1- 3.5 2.5'	1	G C SOIL			
6/7/01 0902	PX-SB1-1-2.0'	1	G C SOIL			
6/7/01 0940	PX-SB3-1-4.0'	1	G C SOIL			
6/7/01 1000	PX-SB4-1-3.5'	1	G C SOIL			
6/7/01 1122	POWERS-SB2-1-4.0'	1	G C SOIL			
6/7/01 1135	POWERS-SB3-1-4.0'	1	G C SOIL			
6/7/01 1145	POWERS-SB4-1-4.0'	1	G C SOIL			
6/7/01 1220	POWERS-SB1-1-4.0'	1	G C SOIL			
/						
Requested by: (Signature) <i>Jeff Ulmer</i>						
Date/Time	Received for Laboratory by:	Remarks:				
6/7/01 1500	<i>Daniel Brown</i>	6/7/01 1230	HAND DELIVERED TO ECBC			
6/7/01 1500	<i>Jeff Ulmer</i>	6/7/01 1500	Arbitrator: NONE			

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Contract Jeff Hunter

PARSONS

ENGINEERING-SCIENCE

CHAIN OF CUSTODY RECORD

3648

ES JOB NUMBER	PROJECT NAME/LOCATION	PRESERVATIVE REQUIRED		ANALYSES REQUIRED		SHIP TO:	
		Date	Time	Sample Type	Matrix	Remarks	Remarks
734643-0900	FAG McLELLAN, A. - CUM - EE/CA						ECBC
SAMPLER(S): (Signature) <i>Jeff Uffing for HFA & TEU.</i>							
7-9-01	1106 WATER TOWER - SS1-1	X	X	G	C	Soil	FACTORY BUILT DRUM
7-9-01	1108 WATER TOWER - SS2-1	X	X	G	C	Soil	CONTENTS OF OPEN DRAIN
7-9-01	1110 WATER TOWER - SS3-1	X	X	G	C	Soil	BROKEN DRUM
7-9-01	1112 WATER TOWER - SS4-1	X	X	G	C	Soil	UNDERS REMOVED DRAIN CUM
7-9-01	1114 WATER TOWER - SS5-1	X	X	G	C	Soil	CONTENTS OF REMOVED DRAIN C

Reflect/signed by: (Signature) <i>Jeff Uffing</i> Date/Time <i>7-9-01 11:55</i> Received for Laboratory by: <i>Elizabeth H. H. H.</i>							
(Signature) <i>David Board</i> Date/Time <i>7-9-01 14:20</i> Received for Laboratory by: <i>Jeff Uffing</i>							
Remarks: <i>HAND DELIVERED TO ECBC</i>							
Airbill: <i>— NONE —</i>							

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Fax Coversheet

TO: Richard Sathin
COMPANY: PARSONS
FAX NUMBER: 770-446-4910
FROM: THERESA WECHSLER
DATE: 11/26/01

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Form approved OMB No 2050-0039, expires 09/30/95

Please print or type. (Form designed for use on either 12-point typewriter)

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. 5-1-1-1-0-0-0-5-8-2	Manifest (Document) No. 3-2-2	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address FORT MCCLELLAN TRANSITION 5890 YOUNG'S BENT BOULEVARD MADISON, GA 30602		201 YIMBY PARES-BLDG. BLDG FORT MCCLELLAN, AL 35205		A. State Manifest Document Number CWM 0014745		
4. Generator's Phone 256 848-5800		6. US EPA ID Number M J D 0 5 0 6 2 1 2 8 6		C. State Transporter ID Number NONA8001668		
5. Transporter 1 Company Name ENVIRONMENTAL SVCS L.L.C.		8. US EPA ID Number INTD054126164		E. State Transporter ID NONA8001668		
7. Transporter 2 Company Name FREEHOLD CARTAGE INC.		10. US EPA ID Number		G. State Facility ID		
8. Designated Facility Name and Site Address SUNBELT WASTE MANAGEMENT INC HIGHWAY 75 PORT ARTHUR, TX 77640		9. Facility Name 3.5 MILES W. OF TAYLOR'S BAYOU TX D 0 0 0 3 3 8 8 9 8		F. Facility Phone 409 765-0101		
11A. HM Number	11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	15. Hazardous
	NON-REGULATED MATERIAL, NON-RCRA, NON-DEQ, DOT NON-REGULATED, NONE	005	DR	02000	P	NONE
	NON-REGULATED MATERIAL, NON-RCRA, NON-DEQ, DOT NON-REGULATED, NONE	005	DR	02000	P	NONE
14. Additional Descriptions for Materials Listed Above: SLIDE 1/2 - 5 BY 5						
15. Special Handling Instructions and Additional Information: PACKING SLIPS ATTACHED FOR CLARIFICATION EMERGENCY NUMBER-INFO TRAC-800 525-5053						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations. If I am a large-quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small-quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.						
Printed/Typed Name Ronald M. Levy Env. Council		Signature <i>Ronald M. Levy</i>		Month Day Year 10/12/01		
17. Transporter 1 Acknowledgement of Receipt of Materials		Signature <i>Ray Adams</i>		Month Day Year 10/10/01		
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature <i>James H. Smith</i>		Month Day Year 10/11/01		
19. Discrepancy Indication Space						
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 16						Date
Printed/Typed Name Martha Williams		Signature <i>Martha Williams</i>		Month Day Year 10/15/01		

UNIFORM HAZARDOUS WASTE MANIFEST

TRANSPORTER 1

TRANSPORTER 2

FACILITY

~~ENV~~ ENVIRONMENTAL SERVICES, L.L.C.

Federal EPA ID: TXD000838896
State EPA ID: 50212-001
Highway 73
Port Arthur, TX 77643
(409) 736-2821

FT MCCLELLAN TRANSITION FORCE
ATTN: MANIFEST SECTION
AL4210020562
291 JIMMY PARKS BLVD
FORT MCCLELLAN, AL 36205-5000

CERTIFICATE OF DESTRUCTION

Onyx Environmental Services, L.L.C. has received waste material from
FT MCCLELLAN TRANSITION FORCE on 10/25/01 as described on [State
Manifest or Uniform] Hazardous Waste Manifest number 0000014746.

Sequence 2

Profile Number: 561808
Onyx Tracking ID: 558782-02

<u>CWM Unit ID</u>	<u>Treatment Date</u>
1	1/17/02
2	1/17/02
3	1/17/02
4	1/17/02
5	1/17/02

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits, and licenses on the date listed above.

Melvin Stallworth

18-Jan-02

~~ONYX~~ ENVIRONMENTAL SERVICES, L.L.C.

Federal EPA ID: TXD000838896
State EPA ID: 50212-001
Highway 73
Port Arthur, TX 77643
(409) 736-2821

FT MCCLELLAN TRANSITION FORCE
ATTN: MANIFEST SECTION
AL4210020562
291 JIMMY PARKS BLVD
FORT MCCLELLAN, AL 36205-5000

CERTIFICATE OF DESTRUCTION

Onyx Environmental Services, L.L.C. has received waste material from FT MCCLELLAN TRANSITION FORCE on 10/25/01 as described on [State Manifest or Uniform] Hazardous Waste Manifest number 0000014746.

Sequence 1

Profile Number: 561807
Onyx Tracking ID: 558782-01

<u>CWM Unit ID</u>	<u>Treatment Date</u>
1	1/18/02
2	1/18/02
3	1/18/02
4	1/18/02
5	1/18/02

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits, and licenses on the date listed above.

Melvin Stallworth

22-Jan-02

**QUALITY CONTROL DATA EVALUATION SUMMARY REPORT
FOR CWM EE/CA SITES AT
FORT MCCLELLAN, ALABAMA**

INTRODUCTION

This data evaluation summary report covers 152 soil samples collected during the period of April 24, 2001 and July 9, 2001 from CWM EE/CA sites at Fort McClellan. The samples were analyzed for various combinations of the following chemical warfare compounds and their breakdown products: mustard (HD), Lewisite (L), 1,4-dithiane, 1,4-thioxane (1,4-oxathiane), thiodiglycol (TDG), Sarin (GB) and VX. All samples were extracted and analyzed by U.S. Edgewood Chemical and Biological Center (ECBC) in Edgewood, Maryland.

Field quality control samples collected were matrix spike/matrix spike duplicates (MS/MSD). These field quality control samples were analyzed for the same parameters as their associated samples. The required frequency for MS/MSD samples was one MS/MSD per maximum of twenty samples. Eight MS/MSD samples were extracted and analyzed for the Fort McClellan project. Therefore, the required frequency for MS/MSD samples was met.

Samples were collected by Parsons Engineering Science (Parsons ES) in accordance with procedures described in the Final Work Plan/Site Safety Submission (September 2000). All analyses were performed by ECBC following procedures outlined in the Final Work Plan/Site Safety Submission.

EVALUATION RESULTS

The QC data submitted by ECBC has been reviewed and evaluated following the guidelines outlined in the Final Work Plan/Site Safety Submission. Information reviewed in the data packages includes matrix spike and matrix spike duplicate results, duplicate sample results, quantitation limits, and chain-of-custody forms. The analyses and findings presented in this report are based on the reviewed information, and meeting guidelines in the Final Work Plan/Site Safety Submission with the exceptions noted below.

Accuracy Results

Accuracy was evaluated using the %R results for the MS/MSD samples. The following samples were analyzed as MS/MSD samples for this project:

All MS/MSD and laboratory duplicate RPDs were within acceptance criteria.

Completeness

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

No reported results for the samples in this project have been rejected or invalidated (qualified “R”). The completeness for this SDG is 100% compared to the minimum acceptance limit of 90%.

Survey Data
Fort McClellan, Alabama

Point #	Latitude	Longitude	Northing	Easting	Elevation	Description
201	33 43 33.725449 N	85 46 17.679133 W	1173616.1600	674943.9200	1004.01	T38 TRENCH B1
202	33 43 33.918204 N	85 46 17.750271 W	1173635.6400	674937.9000	1000.41	T38 TRENCH B1
203	33 43 33.914840 N	85 46 17.750392 W	1173635.3000	674937.8900	1000.38	T38 TRENCH C1
204	33 43 33.987105 N	85 46 17.444042 W	1173642.6200	674963.7600	999.70	T38 TRENCH C1
205	33 43 34.004231 N	85 46 17.466288 W	1173644.3500	674961.8800	999.50	T38 TRENCH A1
206	33 43 33.756983 N	85 46 17.431301 W	1173619.3600	674964.8500	1003.80	T38 TRENCH A1
207	33 43 33.758333 N	85 46 17.557869 W	1173619.4900	674954.1600	1003.71	T38 TRENCH D1
208	33 43 33.962251 N	85 46 17.597386 W	1173640.1000	674950.8100	999.92	T38 TRENCH D1
209	33 43 33.647202 N	85 46 17.298655 W	1173608.2700	674976.0600	1004.52	T38 TRENCH C2
210	33 43 33.604150 N	85 46 17.462786 W	1173603.9100	674962.2000	1004.58	T38 TRENCH C2
211	33 43 33.509294 N	85 46 17.701073 W	1173594.3100	674942.0800	1006.15	T38 TRENCH A2
212	33 43 33.490845 N	85 46 17.210796 W	1173592.4700	674983.4900	1005.51	T38 TRENCH A2
213	33 43 33.350618 N	85 46 17.918922 W	1173578.2600	674923.6900	1008.11	T38 TRENCH D2
214	33 43 33.541813 N	85 46 17.443295 W	1173597.6100	674963.8500	1004.98	T38 TRENCH D2
215	33 43 33.532239 N	85 46 17.489241 W	1173596.6400	674959.9700	1004.88	T38 TRENCH B2
216	33 43 33.459645 N	85 46 17.335374 W	1173589.3100	674972.9700	1005.27	T38 TRENCH B2
217	33 43 33.398378 N	85 46 17.475958 W	1173583.1100	674961.1000	1004.95	T38 TRENCH E2
218	33 43 33.314684 N	85 46 17.282909 W	1173574.6600	674977.4100	1005.14	T38 TRENCH E2
219	33 43 29.080502 N	85 46 16.296028 W	1173146.7200	675061.0200	1019.00	T38 SB1
220	33 43 28.819477 N	85 46 16.407509 W	1173120.3300	675051.6200	1019.10	T38 SB2
226	33 43 15.177375 N	85 46 11.929332 W	1171741.6200	675430.7000	0.00	CWS DRUM
301	33 42 30.157715 N	85 47 37.524255 W	1167187.4468	668202.6526	804.34	OTTA SB-2
302	33 42 30.680164 N	85 47 37.701725 W	1167240.2500	668187.6400	804.25	OTTA SB-1
303	33 42 31.359716 N	85 47 32.500360 W	1167309.1100	668627.0100	806.46	SB3/3182
304	33 42 30.875704 N	85 47 31.796495 W	1167260.2100	668686.4900	809.11	SB3/3182
305	33 42 29.741206 N	85 47 31.960275 W	1167145.5300	668672.7000	809.69	SB4/3182
306	33 42 32.145345 N	85 47 32.233997 W	1167388.5300	668649.4800	805.87	SB1/3182
501	33 44 01.330922 N	85 46 24.850015 W	1176406.1600	674336.6500	830.76	T31-SB-2
502	33 44 01.564665 N	85 46 25.396669 W	1176429.7600	674290.4700	829.80	T31-SB-1
503	33 43 59.335681 N	85 46 24.466806 W	1176204.5000	674369.1300	830.29	T31-MAG-1
504	33 43 59.316989 N	85 46 24.276536 W	1176202.6200	674385.2000	830.49	T31-MAG-2
505	33 43 59.109963 N	85 46 24.354712 W	1176181.6900	674378.6100	830.56	T31-MAG-3
506	33 43 59.006163 N	85 46 24.312867 W	1176171.2000	674382.1500	829.84	T31-MAG-4
507	33 43 58.978255 N	85 46 23.885668 W	1176168.4000	674418.2300	831.77	T31-MAG-5
508	33 43 59.099158 N	85 46 23.090825 W	1176180.6600	674485.3500	833.60	T31-MAG-6
509	33 43 59.085466 N	85 46 23.009843 W	1176179.2800	674492.1900	833.59	T31-MAG-7

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510	33 43 59.072918 N	85 46 22.840053 W	1176178.0200	674506.5300	833.90	T31-MAG-8
511	33 44 01.469852 N	85 46 21.262936 W	1176420.3800	674639.5800	839.98	T31-SB-4
512	33 44 02.296943 N	85 46 21.509830 W	1176503.9700	674618.6800	840.24	T31-SB-5
513	33 44 02.833882 N	85 46 22.594444 W	1176558.1900	674527.0500	836.03	T31-SB-3
514	33 44 03.116552 N	85 46 23.653544 W	1176586.7100	674437.5900	834.07	T31-SB-6
515	33 42 27.095706 N	85 47 10.987030 W	1166878.8800	670444.5900	785.04	CCTA-SB-3
516	33 42 28.380106 N	85 47 11.678583 W	1167008.6800	670386.1100	783.43	CCTA-SB-1
517	33 42 25.982734 N	85 47 10.243305 W	1166766.4100	670507.4700	783.47	CCTA-SB-5
518	33 42 25.568244 N	85 47 12.425739 W	1166724.4300	670323.1200	788.79	NF-SB-9
519	33 42 25.168188 N	85 47 12.492480 W	1166683.9900	670317.5000	788.90	NF-SB-8
520	33 42 24.614637 N	85 47 13.476811 W	1166628.0000	670234.3700	791.65	NF-SB-10
521	33 42 24.241599 N	85 47 14.099059 W	1166590.2700	670181.8200	795.03	NF-SB-4
522	33 42 23.695164 N	85 47 13.480500 W	1166535.0600	670234.1000	797.86	NF-SB-2
523	33 42 21.797480 N	85 47 13.564022 W	1166343.2400	670227.1300	815.36	NF-SB-7
524	33 42 22.482769 N	85 47 13.791876 W	1166412.5000	670207.8500	807.78	NF-SB-3
525	33 42 23.193655 N	85 47 12.631922 W	1166484.4000	670305.8100	798.15	NF-SB-6
526	33 42 23.655911 N	85 47 11.964763 W	1166531.1500	670362.1500	794.49	NF-SB-5
527	33 42 23.102966 N	85 47 14.567000 W	1166475.1600	670142.3400	810.06	NF-SB-1
528	33 42 28.180654 N	85 47 10.362017 W	1166988.5700	670497.3400	781.13	CCTA-SB-2
529	33 42 26.719405 N	85 47 09.528282 W	1166840.9000	670567.8400	782.66	CCTA-SB-4
530	33 42 25.680967 N	85 47 08.633359 W	1166735.9700	670643.4900	786.82	CCTA-SB-6
531	33 42 17.371883 N	85 47 12.857594 W	1165895.9300	670287.0100	849.77	T-6-HM-1
532	33 42 17.265011 N	85 47 13.053790 W	1165885.1200	670270.4400	853.83	T-6-HM-2
533	33 42 17.063815 N	85 47 13.138296 W	1165864.7800	670263.3100	862.12	T-6-HM-3
534	33 42 17.096403 N	85 47 12.978835 W	1165868.0800	670276.7800	859.61	T-6-HM-4
535	33 42 16.895941 N	85 47 12.912655 W	1165847.8200	670282.3800	859.90	T-6-HM-5
536	33 42 17.095546 N	85 47 12.806370 W	1165868.0000	670291.3500	857.37	T-6-HM-6
537	33 42 16.954447 N	85 47 12.746196 W	1165853.7400	670296.4400	857.05	T-6-HM-7
538	33 42 17.240475 N	85 47 33.547298 W	1165881.9100	668539.1300	825.80	FPD-SB-1
539	33 42 17.611760 N	85 47 33.226696 W	1165919.4500	668566.2000	824.09	FPD-SB-3
540	33 42 17.212700 N	85 47 33.024117 W	1165879.1200	668583.3300	823.96	FPD-SB-2
541	33 42 16.975524 N	85 47 33.216106 W	1165855.1400	668567.1200	823.02	FPD-SB-4
542	33 42 18.955540 N	85 47 41.191924 W	1166055.0200	667893.2400	843.65	OBP-1
543	33 42 19.093716 N	85 47 41.406942 W	1166068.9800	667875.0700	842.82	OBP-2
544	33 42 19.149675 N	85 47 41.607200 W	1166074.6300	667858.1500	843.45	OBP-3
545	33 41 05.446210 N	85 45 25.070851 W	1158631.1500	679398.3100	1006.12	T24-34

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546	33 41 05.719569 N	85 45 25.245875 W	1158658.7700	679383.5000	1005.21	T24-30
547	33 41 06.045296 N	85 45 25.152215 W	1158691.7000	679391.3900	1002.14	T24-31
548	33 41 06.050061 N	85 45 25.499192 W	1158692.1600	679362.0700	1003.17	T24-33
549	33 41 05.968892 N	85 45 25.909202 W	1158683.9300	679327.4300	1002.14	T24-32
550	33 41 05.820347 N	85 45 25.993120 W	1158668.9100	679320.3500	1002.11	T24-29-C
551	33 41 05.656421 N	85 45 26.161784 W	1158652.3300	679306.1100	1000.55	T24-29-C1
552	33 41 05.505248 N	85 45 25.993516 W	1158637.0600	679320.3400	1002.92	T24-29-C1
553	33 41 05.741751 N	85 45 25.760646 W	1158660.9800	679340.0000	1003.08	T24-29-B
554	33 41 05.671333 N	85 45 25.636685 W	1158653.8700	679350.4800	1004.28	T24-29-A
555	33 41 05.438449 N	85 45 25.800558 W	1158630.3200	679336.6500	1004.27	T24-29-A1
556	33 41 05.342760 N	85 45 25.606798 W	1158620.6600	679353.0300	1004.96	T24-27
557	33 41 04.796354 N	85 45 24.162794 W	1158565.5200	679475.0900	1009.66	T24-26
558	33 41 04.659406 N	85 45 23.961497 W	1158551.6900	679492.1100	1010.05	T24-25
559	33 41 04.416433 N	85 45 23.810472 W	1158527.1400	679504.8900	1011.42	T24-24
560	33 41 04.112989 N	85 45 23.621868 W	1158496.4800	679520.8500	1014.04	T24-17
561	33 41 03.700840 N	85 45 23.309220 W	1158454.8400	679547.3000	1017.06	T24-12
562	33 41 03.681663 N	85 45 23.494442 W	1158452.8900	679531.6500	1016.54	T24-15A
563	33 41 03.653899 N	85 45 23.711150 W	1158450.0700	679513.3400	1015.76	T24-15-A1
564	33 41 03.513085 N	85 45 23.338617 W	1158435.8600	679544.8300	1017.43	T24-11
565	33 41 03.421868 N	85 45 22.067708 W	1158426.7200	679652.2300	1020.97	T24-9
566	33 41 03.090687 N	85 45 22.932016 W	1158393.1900	679579.2200	1020.55	T24-18
567	33 41 02.793471 N	85 45 22.737254 W	1158363.1600	679595.7000	1022.18	T24-7
568	33 41 02.118694 N	85 45 22.326975 W	1158294.9800	679630.4200	1027.11	T24-4
569	33 41 01.862475 N	85 45 22.509923 W	1158269.0700	679614.9800	1027.25	T24-2
570	33 41 01.385543 N	85 45 22.703718 W	1158220.8500	679598.6400	1027.49	T24-1
571	33 41 02.032201 N	85 45 22.760181 W	1158286.2100	679593.8200	1024.91	T24-5-C1
572	33 41 02.152480 N	85 45 22.723507 W	1158298.3700	679596.9100	1024.71	T24-5-C
573	33 41 02.178859 N	85 45 22.824547 W	1158301.0300	679588.3700	1024.39	T24-5-A
574	33 41 02.170644 N	85 45 22.819820 W	1158300.2000	679588.7700	1024.52	T24-5-B
575	33 41 02.039035 N	85 45 22.931178 W	1158286.8900	679579.3700	1023.63	T24-5-A1
576	33 41 02.190077 N	85 45 22.887376 W	1158302.1600	679583.0600	1023.96	T24-5
577	33 41 02.241400 N	85 45 23.008985 W	1158307.3400	679572.7800	1023.26	T24-5-B1
578	33 41 02.591729 N	85 45 23.979309 W	1158342.6900	679490.7600	1015.89	T24-6
579	33 41 02.963250 N	85 45 24.665479 W	1158380.2000	679432.7500	1013.37	T24-13
580	33 41 03.162337 N	85 45 24.562464 W	1158400.3300	679441.4400	1013.67	T24-14
581	33 41 03.489964 N	85 45 24.501937 W	1158433.4500	679446.5300	1013.54	T24-16-A

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Point #	Latitude	Longitude	Northing	Easting	Elevation	Description
582	33 41 03.707726 N	85 45 24.361628 W	1158455.4700	679458.3700	1013.36	T24-16-A1
583	33 41 03.883072 N	85 45 24.422418 W	1158473.1900	679453.2200	1012.24	T24-19
584	33 41 03.889918 N	85 45 24.774124 W	1158473.8600	679423.5000	1010.08	T24-21
585	33 41 03.942398 N	85 45 25.008513 W	1158479.1500	679403.6900	1008.53	T24-22
586	33 41 04.086830 N	85 45 24.512888 W	1158493.7800	679445.5600	1011.25	T24-20
587	33 41 04.308002 N	85 45 24.127962 W	1158516.1600	679478.0700	1011.69	T24-23-A1
588	33 41 04.183351 N	85 45 24.133989 W	1158503.5600	679477.5700	1012.16	T24-23-A
589	33 42 15.605609 N	85 47 29.070752 W	1165716.8100	668917.3800	814.61	BT-SB-13
590	33 42 15.447958 N	85 47 28.045870 W	1165700.9100	669003.9700	815.18	BT-SB-14
591	33 42 16.389306 N	85 47 27.207353 W	1165796.0900	669074.7700	812.88	BT-SB-15
592	33 42 17.471809 N	85 47 27.170836 W	1165905.5100	669077.8100	810.29	BT-SB-7
593	33 42 17.652604 N	85 47 26.728990 W	1165923.8000	669115.1300	809.39	BT-SB-16
594	33 42 18.395341 N	85 47 26.885701 W	1165998.8700	669101.8600	808.11	BT-SB-4
595	33 42 19.280450 N	85 47 26.206528 W	1166088.3600	669159.2000	805.74	BT-SB-17
596	33 42 20.023246 N	85 47 25.959593 W	1166163.4500	669180.0300	804.46	BT-SB-18
597	33 42 20.088177 N	85 47 26.623267 W	1166169.9900	669123.9600	804.97	BT-SB-1
598	33 42 20.835025 N	85 47 26.940015 W	1166245.4700	669097.1700	804.45	BT-SB-9
599	33 42 20.963836 N	85 47 28.387396 W	1166258.4400	668974.8900	805.34	BT-SB-10
600	33 42 19.741035 N	85 47 28.095972 W	1166134.8500	668999.5600	806.79	BT-SB-2
601	33 42 19.351137 N	85 47 29.241398 W	1166095.4000	668902.8100	808.10	BT-SB-11
602	33 42 18.678803 N	85 47 28.973261 W	1166027.4500	668925.4900	809.23	BT-SB-3
603	33 42 18.158711 N	85 47 28.664804 W	1165974.8900	668951.5700	809.83	BT-SB-5
604	33 42 17.614512 N	85 47 28.744377 W	1165919.8800	668944.8700	810.69	BT-SB-6
605	33 42 17.176188 N	85 47 29.457414 W	1165875.5500	668884.6500	811.75	BT-SB-12
606	33 42 16.679157 N	85 47 28.883680 W	1165825.3300	668933.1400	812.52	BT-SB-8
607	33 42 37.233222 N	85 47 39.872726 W	1167902.5600	668003.9900	786.43	SB4RUCKR
608	33 42 37.350031 N	85 47 40.409515 W	1167914.3500	667958.6400	783.91	SB3RUCKR
609	33 42 36.779270 N	85 47 40.339100 W	1167856.6600	667964.6100	785.91	SB2RUCKR
610	33 42 37.218269 N	85 47 39.203071 W	1167901.0700	668060.5600	789.32	SB1RUCKR
611	33 42 50.694487 N	85 47 42.997281 W	1169263.1200	667739.5400	792.17	SB1POWRS
613	33 42 49.611769 N	85 47 40.116098 W	1169153.7700	667982.9600	795.14	SB4POWRS
614	33 42 48.989827 N	85 47 41.519205 W	1169090.8600	667864.4600	792.81	SB2POWRS
615	33 42 14.135813 N	85 47 32.430533 W	1165568.1300	668633.6000	825.01	SB2/DT
616	33 42 14.190861 N	85 47 32.854859 W	1165573.6800	668597.7500	823.71	SB1/DT
617	33 42 48.660403 N	85 47 16.248378 W	1169058.4300	669999.1600	766.98	SB1/PX
618	33 42 48.497210 N	85 47 15.300108 W	1169041.9700	670079.2700	768.16	SB2/PX

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619	33 42 46.733242 N	85 47 14.737312 W	1168863.6900	670126.8900	772.26	SB3/PX
620	33 42 46.546429 N	85 47 15.456577 W	1168844.7800	670066.1400	771.13	SB4/PX
621	33 42 42.856921 N	85 47 0.525059 W	1168472.4300	671327.6300	783.73	SB1/AIA
622	33 42 43.502391 N	85 47 0.863963 W	1168537.6600	671298.9700	782.24	SB2/AIA
623	33 42 43.866004 N	85 47 0.960233 W	1168574.4100	671290.8200	781.92	SB3/AIA
624	33 42 44.398326 N	85 47 01.127197 W	1168628.2100	671276.6900	781.35	SB4/AIA
625	33 43 06.451518 N	85 47 02.551850 W	1170857.2800	671155.2800	781.61	SB1NATVE
626	33 43 05.693910 N	85 47 02.829312 W	1170780.6900	671131.8800	781.41	SB2NATVE
627	33 43 04.718236 N	85 47 02.810690 W	1170682.0700	671133.5000	779.27	SB3NATVE
628	33 43 05.566439 N	85 47 03.708536 W	1170767.7700	671057.6200	780.25	SB4NATVE