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LABORATORY EQUIPMENT DECONTAMINATION AND WASTE DISPOSAL COMPLETION  
REPORT FOR BUILDING 13  
5/30/2014

30 May 2014

David Criswell, P.E.  
Deputy Base Closure Manager  
Navy BRAC Program Management Office Southeast  
203 S. Davis Drive, Bldg 247  
Joint Base Charleston, South Carolina 29404

**RE: Laboratory Equipment Decontamination and  
Waste Disposal Completion Report  
Building 13 — Former Charleston Naval Complex  
North Charleston, South Carolina**

Dear Mr. Criswell:

This report summarizes decontamination of laboratory equipment and disposal of laboratory waste from Building 13 at the former Charleston Naval Complex. Work was accomplished under the Comprehensive, Long-Term Environmental Action Navy contract number N62470-11-D-8013, Delivery Order JM62. Activities, as described herein, were conducted in general accordance with the revised Navy Statement of Work, dated 8 May 2013, and Resolution **Consultant's Plan of Action/Cost Estimate, dated 24 July 2013.**

**BACKGROUND**

From 1906 to 2000, the approximate 13,000-square foot, three-story, brick Building 13, at the intersection of A Avenue South and Pipefitter Street in North Charleston, South Carolina, served as a quality assurance office and administration building for the Navy. Historically, a portion of the building operated as a chemical and testing laboratory for an unknown duration. Laboratory operations ceased in 2000 and the building has remained vacant since that time. The Navy transferred Building 13 to the city of North Charleston, which subsequently sold it in 2005 to CMMC, LLC. Access to Building 13 is currently managed by CMMC security.

**WORK PLANNING**

Prior to initiating project activities, Resolution Consultants prepared the following work planning documents, which were subsequently approved by the Navy:

- *Accident Prevention Plan and Site Safety and Health Plan, Visual Inspection and Inventory, dated 21 February 2013*
- *Accident Prevention Plan and Site Safety and Health Plan, Revision 1, Laboratory Equipment Decontamination and Waste Removal, dated 26 November 2013*



- *Laboratory Equipment Decontamination and Waste Disposal Work Plan*, dated 7 January 2014

## **HEALTH AND SAFETY**

Due to the age of Building 13 and the extended period of time it has remained vacant, the presence of asbestos containing materials, lead based paint, mold, and pigeon feces was considered during health and safety planning. Additionally, details associated with historical laboratory testing were not available and the nature of contamination of laboratory equipment and waste within the historical laboratory were unknown. In planning for field activities, Resolution Consultants and subcontractors prepared accident prevention plans, as referenced above, to manage these hazards and protect workers. Health and safety meetings were performed and Safety Work Assessment Permits were completed each day before entering Building 13 to ensure workers were cognizant of hazards and following established safety protocols.

## **STRUCTURAL ASSESSMENT**

Due to the age and vacant status of Building 13, Resolution Consultants subcontracted Britt, Peters, and Associates, a South Carolina certified Professional Engineering firm specializing in structural engineering, to evaluate the building prior to entry. Separate structural assessments were performed prior to the 2013 inspection and 2014 decontamination efforts. Structural assessment reports are provided as Attachment A and Attachment B. Britt, Peters, and Associates concluded that structural components remain in fair to good condition and shoring of the floor was not necessary; however, due to visible water damage and potential concerns associated with interior floor joists, Britt, Peters, and Associates recommended that no more than three people at a time should enter rooms 201, 202, and 203. Furthermore, it was recommended no more than 250 pounds of equipment be transported via the existing stairways. Areas with such limitations were clearly marked using signage and caution tape.

## **INSPECTION AND INVENTORY**

Under oversight by Resolution Consultants, EnviroSmart, a small, woman-owned hazardous materials subcontractor, visually inspected Building 13 for laboratory equipment and waste on 26 and 27 March 2013. Findings and recommendations were reported in the *Laboratory Waste Inspection, Building 13 — Former Charleston Naval Complex, North Charleston, South Carolina* letter report, dated 1 October 2013. In general, laboratory wastes and equipment requiring decontamination and disposal were identified on all three floors of Building 13. Laboratory wastes included empty glassware; cathode and mercury vapor lamps; propane canisters; and small volume (12-ounce) containers of insecticides, paint aerosol cans, and oil/lubricants. Wastes were characterized as non-hazardous and hazardous, disposable to a Sub-Title D, special waste landfill. Laboratory equipment varied in size from handheld to heavy equipment, including several fume hoods.

## **DECONTAMINATION AND WASTE REMOVAL**

From 20 through 24 January 2014, under direct oversight of Resolution Consultants, EnviroSmart performed activities to decontaminate laboratory equipment and remove wastes as identified in the *Laboratory Waste Inspection, Building 13 — Former Charleston Naval Complex*,



*North Charleston, South Carolina* letter report. Work was conducted in general accordance to **Resolution Consultants' Laboratory Equipment Decontamination and Waste Disposal Work Plan, Building 13 — Former Charleston Naval Complex, North Charleston** dated 7 January 2014. Decontamination activities included manually scrubbing laboratory equipment with a diluted bleach and water solution and containerizing all fluids. Laboratory chemicals, wastes, decontamination fluids, cleaning materials, and personal protective equipment were segregated, containerized, and staged in Building 13 for later transportation. On 11 March 2014, ECOFLO, Inc., a certified waste management vendor, transported approximately 450 pounds of solid and liquid waste from Building 13 under profile and manifest to **ECOFLO's** appropriately certified facility in Greensboro, North Carolina. **EnviroSmart's** completion report with a description of activities, a checklist of decontaminated laboratory equipment and containerized waste, and fully executed waste manifests is included as Attachment C.

Resolution Consultants sincerely appreciates the opportunity to provide comprehensive environmental services to the Navy. Should you have any questions concerning the information presented herein, feel free to contact me via email at [dwarren@ensafe.com](mailto:dwarren@ensafe.com) or telephone at 843-884-0029.

Sincerely,



By: David Warren  
*Project Manager, Resolution Consultants*

Attachments: Attachment A — *Report of Structural Evaluation, Building 13 Charleston Naval Complex*, Britt, Peters and Associates Inc., 8 January 2013.

Attachment B — *Update of the Structural Condition Assessment of Building 13 Charleston Naval Complex*, Britt, Peters and Associates Inc., 17 January 2014.

Attachment C — *Completion Summary Report, Building 13, Equipment Decontamination and Waste Disposal, Former Charleston Naval Complex*, EnviroSmart, 11 April 2014.

CC: Art Sanford, NAVFAC BRAC PMO SE  
Shawn Dolan, Resolution Consultants  
Chad Tripp, Resolution Consultants



**Attachment A**  
**Report of Structural Evaluation,**  
**Building 13 Charleston Naval Complex**



January 8, 2013

c/o Mr. David Warren  
Resolution Consultants  
313 Wingo Way  
Mount Pleasant, South Carolina 29464

Re.: Report of Structural Evaluation  
Building 13 - Charleston Naval Complex  
SOW No. JM16CNCRFP2  
BPA Job #12428

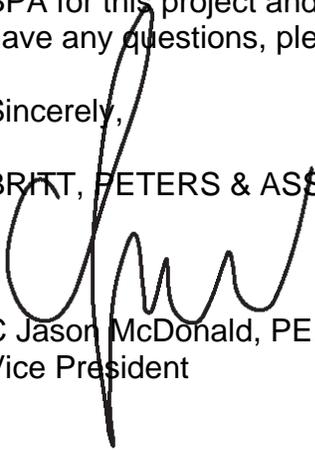
Dear Mr. Warren:

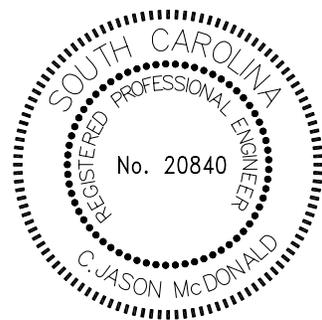
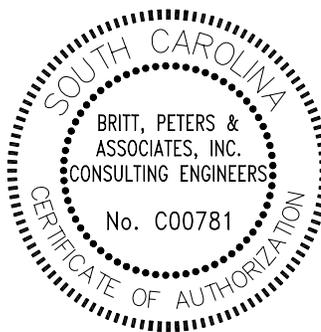
Britt, Peters & Associates, Inc. (BPA) is pleased to submit this Structural Evaluation Report (SER) for the above-reference site. The purpose of our services was to identify readily visible deficiencies associated with the building's primary structural components.

This report presents project information, which includes survey procedures and limitations, along with our findings, conclusions and recommendations. We appreciate your selection of BPA for this project and look forward to assisting you further on this and other projects. If you have any questions, please contact us.

Sincerely,

BRITT, PETERS & ASSOCIATES, INC.

  
C Jason McDonald, PE, SE  
Vice President





STRUCTURAL EVALUATION REPORT  
BUILDING 13 - CHARLESTON NAVAL COMPLEX  
SOW No. JM16CNCRFP2



Prepared by:

Britt, Peters & Associates, Inc.  
1100 Queensborough Blvd  
Suite 202  
Mount Pleasant, SC 29464  
BPA Job No. 12428

January 8, 2013

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## **1. EXECUTIVE SUMMARY**

### **a. General Description**

Building 13, located at the Charleston Naval Complex, is a three-story building built in the early 1900's. Attached with a connector is a smaller Boiler House, which was not observed.

Per the drawings and our observations, it is a steel and concrete structure with wood and plaster finishes. The total footprint of the building is approximately 13,200 square feet. Inside, there is one mezzanine, making the total square footage of the building approximately 41,000 square feet (reference exhibits one through five).

### **b. General Physical Condition**

Overall, the structural components are in fair condition for its current age; however the building does not appear to have been maintained in quite some time.

During our walk-through survey, we observed deferred maintenance issues and water intrusion issues. In addition, flaking of the underside of the concrete slab or plaster finish, it was difficult to tell, was noted and corroded reinforcing was exposed (reference exhibit 17).

## **2. PURPOSE AND SCOPE**

The purpose of this Structural Evaluation Report (SER) is to identify readily visible deficiencies associated with the building's primary structural components by performing a walk-through survey, review existing documents, and interview personnel familiar with the building and to provide a safe path for personnel to enter the building and remove laboratory equipment from the second floor.

ASTM 2018-08 "Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process" was used to perform this assessment and the Structural Evaluation Report (SER). This report provides a summary of the information obtained during the Walk-Through Survey, the Document Review and Interviews.

### **3. SYSTEM DESCRIPTION AND OBSERVATION**

#### **a. Overall General Description**

In the simplest terms, the building is a 64' by 206' rectangle, utilizing load-bearing walls and steel floor and roof framing. Most of the structure was concealed by finishes and fire proofing (reference exhibit 6). Although, it was apparent during our walk-through that the building was built in general compliance with the construction documents. Typical eave height of the building is 54'-4" per the cross section on the existing drawings.

This type of building consists of unreinforced clay brick masonry. Interior steel columns support a system of steel beams which in turn support what appears to be a 5-1/4" cast-in-place concrete slab, which is considered stiff relative to the unreinforced masonry walls and interior framing.

#### **b. Primary Structural Components**

##### **i. Foundation**

Based upon our review of the existing structural drawings, the foundation for the building consists of deep pile foundations. The existing slab is supported at grade and has regularly spaced control joints. Some minor shrinkage cracking was observed in the slab-on-grade, but no active signs of distress were noted. In our opinion, the slabs and control joints are in good condition (reference exhibit 7). Some of the floor finishes have deteriorated (reference exhibit 8).

Rectangular concrete pile caps support interior columns while a pile supported perimeter footing supports the exterior masonry walls. We did not observe any obvious issues with the foundations and no deficiencies related to the foundation were reported by the Facility Manager for CMMC.

##### **ii. Building Frame**

The primary structural system for the 2<sup>nd</sup> floor and 3<sup>rd</sup> floor consists of wide-flange steel (or iron) columns, wide flange steel (or iron) beams, and wide flange steel (or iron) joists to support the concrete slab (reference exhibit 9).

The primary structural system for the roof is a series of steel (or iron) trusses.

Per the construction documents, the roof diaphragm consists of horizontal steel "X" bracing. This "X" bracing is either directly connected to the lateral force resisting elements or is connected to "drag struts" that collect the load and transfers it into the shear walls.

Lateral forces (seismic and wind) are resisted by the exterior masonry walls or shear walls. The exterior walls did not exhibit any unusual cracking.

Under room 203 and 206, flaking (reference exhibit 17) along the underside of the concrete slab was observed and appeared to be caused by moisture damage to the reinforcing. It was unclear during our visit if the damage was to the concrete or to the plaster finish. In either case, the wire mesh reinforcing was corroded. No significant cracking was observed in the elevated floor slabs.

The stringers for the main stairs appears to be constructed from heavy timber (reference exhibit 11). We did not notice any unusual sign of distress in the stair members nor did the stairs appear unstable.

In general, the architectural finishes and non-structural ceiling framing have suffered the most from the elements (reference exhibits 10, 13,14, and 16). The Facility Manager for CMMC mentioned termite damage in the offices. We observed moisture damage to the floor underlayment and piles of debris built up in some of the rooms (room 202). Some rooms had contained corrosive chemicals (room 203) that may or may not have contributed to some of the concrete flaking.

We did not observe the Boiler House (reference exhibit 18). However, the floor finishes appeared to be more deteriorated than the main building.

**c. Conclusions and Recommendations**

It is our opinion that the structural components of this building are in fair to good condition. We walked through most of the corridors and rooms and did not observe any obvious damage to the structural components other than what we already mentioned.

Some rooms are filled with laboratory equipment (rooms 201 and 203 and 206). Some rooms are filled with debris from where the ceiling had collapsed (room 204). We recommend extreme caution if these rooms must be entered as the top of the floor slab could not be observed. We did observe the underside of the floor slab and noted flaking of the concrete or plaster under rooms 203 and 206. Because of the uncertainty in these rooms, we recommend a limited number of people (2 to 3) be used to remove any equipment. However, shoring of the floor system should not be required. Heavy equipment (over 250 lbs) should be broken down into smaller components to limit the load on the floor and stairs.

#### **4. ADDITIONAL CONSIDERATIONS**

Latitude 32.8607  
Longitude -79.9647

Using the 2006 International Building Code, the following are the current environmental loads adopted for the site.

Ground Snow Loads = 5 psf

Wind Speed = 130 mph (3-second gust)

Short Period Spectral Accel,  $S_s = 126.3\%g$  (2008 USGS Maps)

Long Period Spectral Accel,  $S_1 = 40.6\%g$  (2008 USGS Maps)

This building is located within a region of High Seismicity and a Hurricane Prone Region

##### Further Inquiry

In addition to the items presented in this report, the following items were noted:

Seismic: Based upon the age of the main building, this building does not meet the Benchmark Provisions of ASCE 31-03 "Seismic Evaluation of Existing Buildings". As such a Tier 1 seismic evaluation would need to be performed if this acceptance criterion were required and further investigation and material testing would be necessary.

#### **5. DOCUMENT REVIEW AND INTERVIEWS**

Drawings reviewed consisted of a partial set of Plans of Proposed Building for Equipment, Building No. 13, US Navy Yard, Charleston, SC, dated February 1903

We met with Rick Brown, Facility Manager for CMMC, and conducted a brief interview with him to discuss the building and its components. Mr. Brown informed us that he knew of no significant structural issues with the property beyond general maintenance and termite damage in some of the offices.

#### **6. OUT OF SCOPE CONSIDERATIONS**

The following activities are excluded from the scope of this SER. These should not be construed as all-inclusive or imply that any exclusion not specifically identified is a SER requirement under ASTM E2018-08.

Identifying capital improvements, enhancements, or upgrades to building components, systems, or finishes.

Removing, relocating, or repositioning of materials, ceiling, wall, or equipment panels, furniture, storage containers, personal effects, debris material or finishes; conducting exploratory probing or testing; dismantling or operating of equipment or appliances; or disturbing personal items or property, that obstructs access or visibility.

Preparing engineering calculations to determine any system's, component's, or equipment's adequacy or compliance with any specific or commonly accepted design requirements or building codes, or preparing designs or specifications to remedy any physical deficiency.

Taking measurements or quantities to establish or confirm any information or representations provided by the owner or user, such as size and dimensions of the subject property or subject building; any legal encumbrances, such as easements; dwelling unit count and mix; building property line setbacks or elevations; number and size of parking spaces; etc.

Reporting on the presence or absence of pests such as wood damaging organisms, rodents, or insects unless evidence of such presence is readily apparent and material during the course of the field observer's walk-through survey or such information is provided to the consultant by the owner, user, property manager, etc.

Reporting on the condition of subterranean conditions, such as soil types and conditions, underground utilities, separate sewage disposal systems, wells; systems that are either considered process-related or peculiar to a specific tenancy or use; or items or systems that are not permanently installed.

Entering or accessing any area of the premises deemed to potentially pose a threat of dangerous or adverse conditions with respect to the field observer's health or safety, or to perform any procedure, that may damage or impair the physical integrity of the property, any system, or component.

Operating or witnessing the operation of lighting, lawn irrigation, or other systems typically controlled by time clocks or that are normally operated by the building's operation staff or service companies.

Providing an environmental assessment or opinion on the presence of any environmental issues such as potable water quality, asbestos, hazardous wastes, toxic materials, the location or presence of designated wetlands, mold, fungus, IAQ, etc.

## **7. QUALIFICATIONS**

The following individuals performed this Structural Evaluation Report:

C Jason McDonald, PE, SE – Britt, Peters & Associates, Inc.

## **8. LIMITING CONDITIONS**

Most of the structural elements were hidden. A structural condition is considered hidden if it is concealed by existing architectural finishes or if it cannot be investigated by reasonable visual observation.

No SER can wholly eliminate the uncertainty regarding the presence of physical deficiencies and the performance of a subject property's building systems. Preparation of a SER in accordance with ASTM 2018-08 is intended to reduce, but not eliminate, the uncertainty regarding the potential for component or system failure and to reduce the potential that such component or system may not be initially observed. This ASTM also recognizes the inherent subjective nature of a consultant's opinions as to such issues as workmanship, quality of original installation, and estimating the RUL of any given component or system. The ASTM recognizes a consultant's suggested remedy may be determined under time constraints, formed without the aid of engineering calculations, testing, exploratory probing, the removal or relocation of materials, design, or other technically exhaustive means. Furthermore, there may be other alternative or more appropriate schemes or methods to remedy a physical deficiency. The consultant's opinions generally are formed without detailed knowledge from those familiar with the component's or system's performance.

In defining good commercial and customary practice for conducting a baseline SER, the goal is to identify and communicate physical deficiencies to a user. The term physical deficiencies means the presence of conspicuous defects or material deferred maintenance of a subject property's material systems, components, or equipment as observed during the field observer's walk-through survey. This definition specifically excludes deficiencies that may be remedied with routine maintenance, miscellaneous minor repairs, normal operating maintenance, etc., and excludes de minimis conditions that generally do not present material physical deficiencies of the subject property.

As such the limitations of our SER are consistent with the general limitations of the ASTM Standard.

**9. EXHIBITS**



**EXHIBIT 1**



EXHIBIT 2



EXHIBIT 3



EXHIBIT 4



EXHIBIT 5



EXHIBIT 6



EXHIBIT 7



EXHIBIT 8



EXHIBIT 9



EXHIBIT 10



EXHIBIT 11



EXHIBIT 12



EXHIBIT 13



EXHIBIT 14



EXHIBIT 15



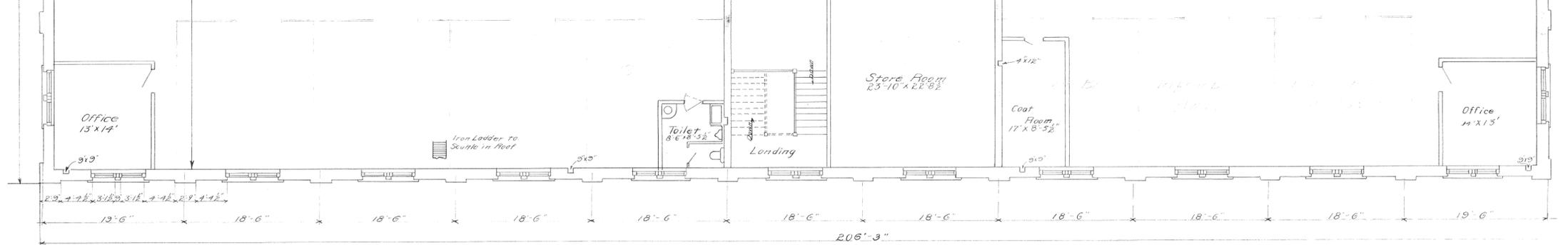
EXHIBIT 16



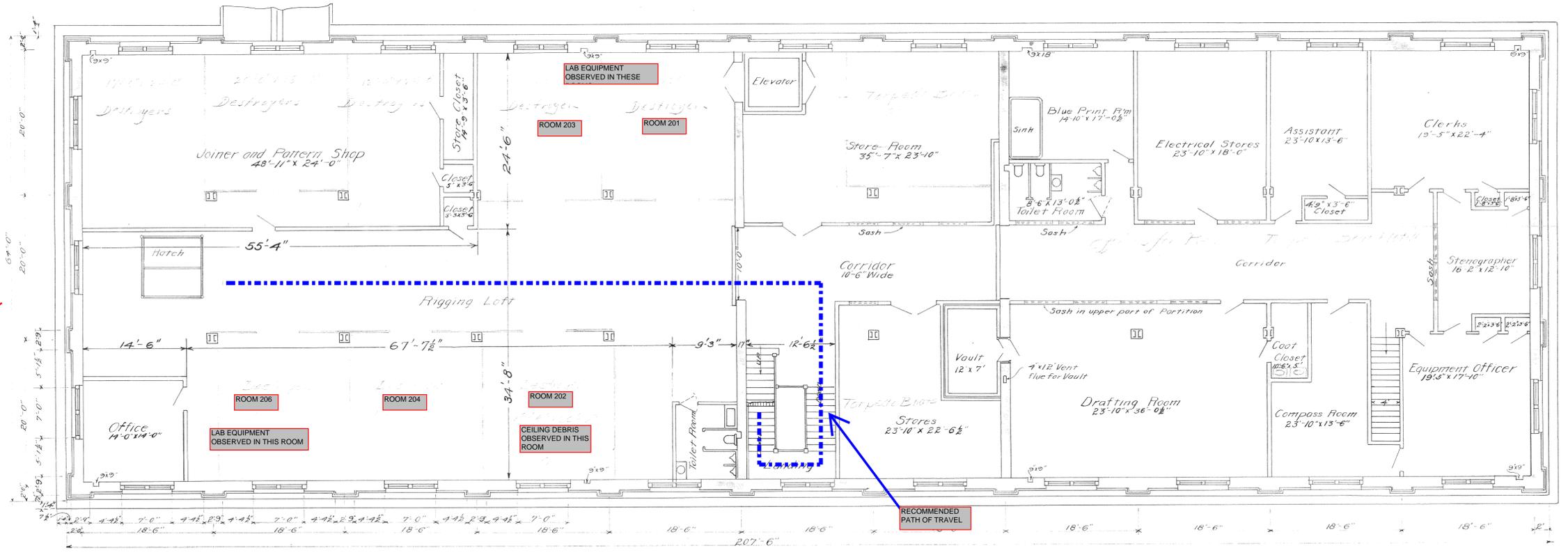
EXHIBIT 17



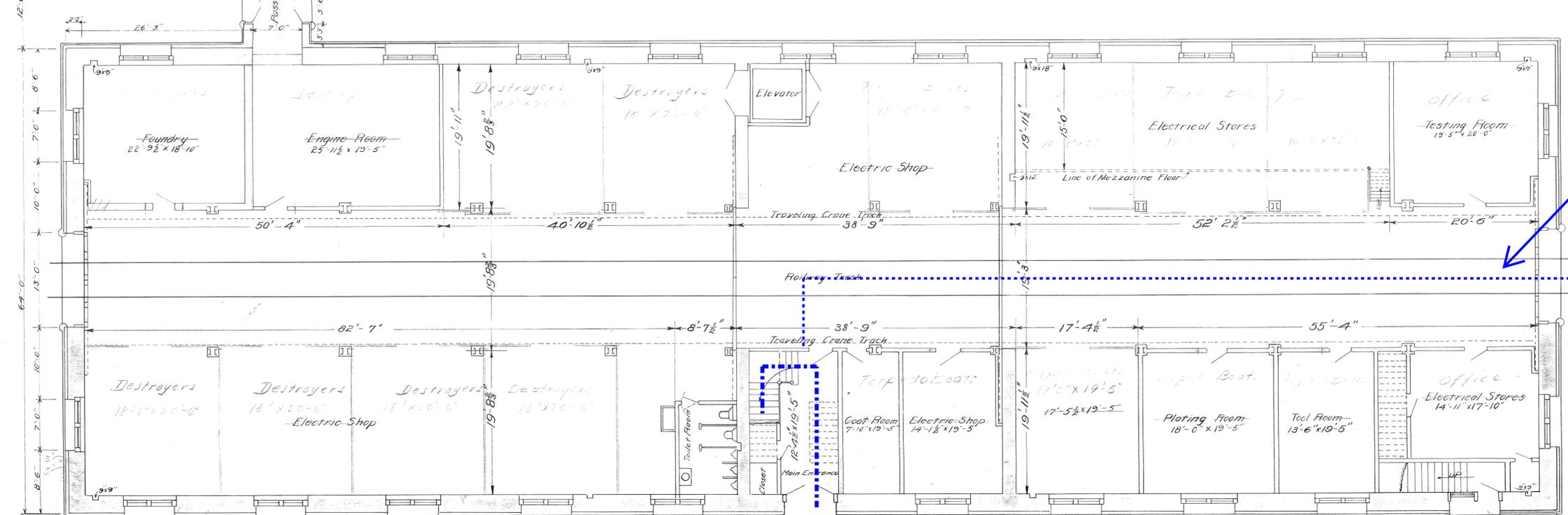
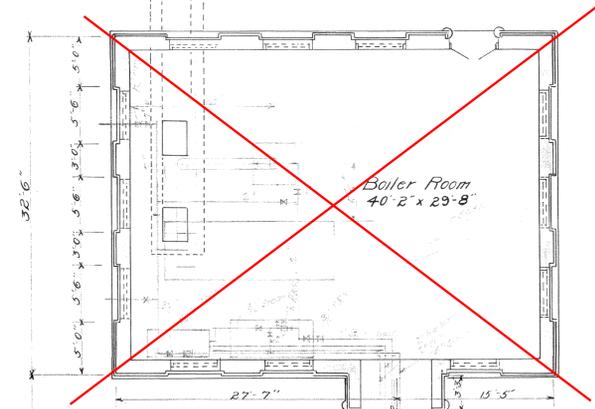
EXHIBIT 18



THIRD FLOOR PLAN  
Scale 1/8" = 1'



SECOND FLOOR PLAN  
Scale 1/8" = 1'



NAVY YARD, CHARLESTON, S  
NOVEMBER, 10, 1903  
BUILDING NO. 13  
EQUIPMENT BUILDING

**Attachment B**  
**Update of the Structural Condition Assessment of Building 13**  
**Charleston Naval Complex**



January 17, 2014

Mr. Chad Tripp  
Ensafe, Inc.  
5724 Summer Trees Drive  
Memphis, TN 38134

Re: Update of the Structural Condition Assessment of  
Building 13 - Charleston Naval Shipyard  
Charleston, South Carolina  
SOW No. 888814364 MS MS  
BPA #14024

Ref: Report of Structural Evaluation by BPA, dated 01.08.13

Dear Mr. Tripp,

Britt, Peters and Associates visited the above referenced site and observed the existing structural conditions on January 16, 2014. The purpose of these observations was to supplement the original report, provided a year ago, and verify it's safe for a limited number of people to travel through the building.

As stated in our original report, Building 13 is a three-story building built in the early 1900's. The building is a steel and concrete structure with wood and plaster finishes. In general, it is our understanding that Building 13 has been left vacant since our last visit and there have been no attempts to rehabilitate the building. During our walk-through survey, we observed deferred maintenance issues and water intrusion issues indicative of an abandoned building.

Most of the structural elements were hidden by existing architectural finishes, and so the damage we observed was limited to items such as ceilings, ceiling framing, floor coverings, interior walls, column wraps, beam wraps, and furniture. We also observed several locations where corroded metal lathe reinforcing was exposed along the underside of the elevated floor slabs, which we expect was for the plaster ceiling.

The columns were hidden and most of the beams could not be observed. The few beams we did see exhibited evidence of corrosion along the flanges and web. However, we did not observe any obvious cracking in the elevated concrete slabs or significant deflections in the framing.

**BRITT, PETERS, & ASSOCIATES, INC.**  
CONSULTING ENGINEERS

Building 13 - Charleston Naval Complex  
Charleston, SC

January 17, 2014  
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BPA #14024

The following is a brief summary of our observations:

The exterior walls exhibited no obvious signs of settlement or issues that would prevent someone from entering the building.



**BRITT, PETERS, & ASSOCIATES, INC.**  
CONSULTING ENGINEERS

Building 13 - Charleston Naval Complex  
Charleston, SC

January 17, 2014  
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Corroded Metal Lathe and Damage to Underside of Floor Slabs.



**BRITT, PETERS, & ASSOCIATES, INC.**  
CONSULTING ENGINEERS

Building 13 - Charleston Naval Complex  
Charleston, SC

January 17, 2014  
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BPA #14024

In rooms 201 and 203, significant damage due to water intrusion was observed. These rooms are more or less over the damaged plaster finish observed in the top picture on the previous page. Due to the uncertainty in this area, we recommend limiting the number of people (2 to 3) inside to remove equipment. We do not recommend allowing heavy equipment in these rooms.



**BRITT, PETERS, & ASSOCIATES, INC.**  
CONSULTING ENGINEERS

Building 13 - Charleston Naval Complex  
Charleston, SC

January 17, 2014  
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BPA #14024

In room 202, significant damage due to water intrusion was observed. Due to the uncertainty in this area, we recommend limiting the number of people (2 to 3) inside to remove equipment. We do not recommend allowing heavy equipment in this room.



**BRITT, PETERS, & ASSOCIATES, INC.**  
CONSULTING ENGINEERS

Building 13 - Charleston Naval Complex  
Charleston, SC

January 17, 2014  
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The central stairs are framed with a combination of timber stringers and steel channel stringers. We did not observe any obvious damage or distress in the primary structural members. However, we recommend anyone traversing the stairs use caution and not carry any heavy equipment (over 250 lbs).



**BRITT, PETERS, & ASSOCIATES, INC.**  
CONSULTING ENGINEERS

Building 13 - Charleston Naval Complex  
Charleston, SC

January 17, 2014  
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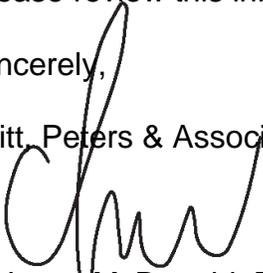
In general, we did not observe any condition that changes the conclusion presented in our original report. As is the case when maintenance is deferred, the deterioration of the finishes has continued and will continue to deteriorate until the building is rehabilitated. The primary structural elements we observed did not exhibit signs of significant damage but there may be hidden members that are compromised. For that reason we recommend limiting the number of people inside (4 to 5 max) and recommend not using heavy equipment (over 250 lbs).

In addition, we recommend the people allowed inside use extreme caution and be aware of their surroundings. Specifically, the potential of trip hazards due to the buckled floor finishes, the potential of a partial collapse of the suspended ceiling framing and tiles, and other issues inherent with abandoned buildings.

Please review this information and contact our office if you have any questions.

Sincerely,

Britt, Peters & Associates, Inc.



C Jason McDonald, PE, SE  
SC #20840  
Vice-President

CJM/mjym

**Attachment C**  
**Completion Summary Report, Building 13,**  
**Equipment Decontamination and Waste Disposal,**  
**Former Charleston Naval Complex**



April 11, 2014

Mr. Chad Tripp  
Resolutions Consultants, A Joint Venture of AECOM & EnSafe  
313 Wingo Way  
Mount Pleasant, South Carolina 29464

Subject: Completion Summary Report  
Building 13, Equipment Decontamination and Waste Disposal  
Former Charleston Naval Complex, South Carolina

Dear Mr. Tripp:

Between the dates of January 20-24, 2014, EnviroSmart Inc. performed equipment decontamination activities at Building 13 located at the former Charleston Naval Complex in accordance with our approved Technical Workplan dated January 3, 2014 (Attachment A). The scope of work included the safe preparation, segregation and containment of generated waste, and the proper decontamination of laboratory equipment present within Building 13. EnviroSmart also coordinated the proper transportation and disposal of laboratory waste remaining in Building 13, as inventoried by EnviroSmart in March 2013.

Upon mobilizing to the site, EnviroSmart personnel attended a Health and Safety meeting to review the on-site Health and Safety Plan; discuss safety issues with the removal activities and the use of equipment at the site; and developed site-specific objectives for ensuring public safety, maintaining staging areas and egress at the site, and achieving project goals.

The sections below provide a summary of the activities completed as further described in the approved Workplan (Attachment A) and the results of the wastes generated and disposed as part of our project requirements. The final waste manifests documenting proper waste handling and disposal are provided as Attachment B.

### **Laboratory Equipment Decontamination**

EnviroSmart personnel safely performed the activities described in Attachment A by initially monitoring the air with the use of a 4-gas meter. Based on the results from the monitoring, it was determined that level D personnel protection equipment with tyvek would suffice for the decontamination activities. Properly trained personnel (40-hour HAZWOPER) then performed the decontamination activities by both physical and chemical methods. Chemical methods consisted of 10% bleach and water solution that was directly applied to the equipment surfaces and wiped clean. All waste, cleaning materials, and PPE were properly containerized and labeled.



**Disposal of Laboratory Waste**

EnviroSmart moved all waste containers by hand from the upper levels of Building 13 and staged in a common area on the ground floor. EnviroSmart then properly segregated, containerized in drums, and provided all necessary documentation (profiles/manifests/LDRs) for all laboratory waste identified in Building 13. The list below provides an inventory of the waste shipped offsite for proper disposal. Refer to Attachment C for an inventory of decontaminated equipment on site.

Aerosols - one 5-gallon poly pail (5 lbs)  
Pyrethrim Aerosol - one 5-gallon poly pail (4 lbs)  
Empty Lab Glassware - two 55-gallon poly drums (total 235 lbs)  
Oil/Wax/Lubricants - one 5-gallon poly pail (35 lbs)  
Paint Cans/Alcohol - one 5-gallon poly pail (12 lbs)  
Mercury Vapor Lamps - one 5-gallon poly pail (5 lbs)  
Hollow Cathode Lamps - one 55-gallon poly drum (55 lbs)  
Propane Canister - one 5-gallon poly pail (5 lbs)  
Aqua-Tector Pads - one 55-gallon steel drum (85 lbs)  
Unknown Liquid - one 5-gallon poly pail (8 lbs)

All of the waste was transported on March 11, 2014 to the disposal facility, ECOFLO, Inc. for proper disposal. ECOFLO's information is provided below for reference. The completed signed hazardous waste manifest and certificate of disposal are included as Attachment B.

ECOFLO, Inc.  
2750 Patterson Street  
Greensboro, NC 27407  
EPA ID: NCD980842132  
Phone: (336) 855-7925

If you have any questions or require additional information please feel free to contact me at 843-722-0062.

Sincerely,



Bryon Snow  
Field Services Director



Attachment A: Technical Workplan dated January 3, 2014





**PROJECT NAME:** Bldg 13, Decontamination and Waste Disposal

**PROJECT JOB NO:** ES-4787

**PROJECT LOCATION:** Charleston Naval Complex Charleston, SC

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## **PURPOSE**

EnviroSmart has prepared this Work Plan for the decontamination of laboratory equipment and transportation and disposal of laboratory waste remaining in Building 13 located on the Charleston Naval Complex Charleston, SC.

Included in the Work Plan are details of the EnviroSmart project staff and their key responsibilities, project scheduling, technical approach, and project health and safety requirements.

The Work Plan outlines several tasks to be completed in the below section, titled Project Task Descriptions. One of the first tasks of the project involves the development and finalization of the Work Plan.

## **SITE BACKGROUND**

From construction in 1906 to 2000, the approximate 13,000 square foot, brick building 13 served as a quality assurance office and administrative building for the United States Navy. A portion of the building historically housed chemical and testing laboratories. Laboratory operations halted in 2000 and the building as remained vacant since that time. Contaminated laboratory equip and waste have remained in the building since this time. Waste consists of labeled and unlabeled chemical containers. Based on information provided by former Navy employees, laboratory operations were confined to three rooms on the second floor and a single room on the first floor of the building. A 2012 structural evaluation of the building



identified laboratory equipment in rooms 201, 203, and 206 on the second floor and minimal lab equipment on the first floor. An inventory of laboratory equipment and waste was conducted in 2013 by EnviroSmart and both laboratory equipment and waste was discovered on all three floors.

## **PROJECT OBJECTIVES**

In general, the scope of work for the project is to safely prepare, decontaminate laboratory equipment (to be removed by others) and contain, transport and dispose of any laboratory waste remaining in the building. At a minimum, the following tasks and subtasks are required to complete this project:

- Establish site-specific Health and Safety Plan, and Work Plan.
- Obtain site security and/or access approval if necessary.
- Mobilize equipment, materials, supplies, and personnel to the site and set up temporary facilities
- Prepare site work area and establish communications with Resolution Consultants supervisor and follow instructions to proceed.
- Establish support zone, and exclusion zone if necessary
- Decontaminate Laboratory Equipment using chemical and physical methods in preparation for disposal or recycling of equipment.
- Provide services necessary for the proper documentation (profiling/manifesting) and transportation/disposal services to an approved disposal facility for laboratory-derived waste from building 13.
- Demobilization of equipment and personnel from site.
- Submit a project Completion Report to include a summary of decontaminated equipment, photographs, quantities of waste generated and all the applicable disposal documentation (profiles, manifests, etc.).

EnviroSmart will closely monitor and/or control all aspects of the project including but not limited to schedule, health & safety, installed work and materials, purchases



made, deliverables, equipment onsite, fuel consumption, weather conditions, and any individuals on site.

## **APPLICABLE ENVIRONMENTAL REGULATIONS**

If necessary, any transportation and disposal of hazardous waste from the site will be subject to the CERCLA Off-site Rule 40CFR (300.440), RCRA regulations (40CFR 262), LDR regulations (40CFR 268), OSHA 1910.120, and DOT regulations (49CFR 172) as required by law and needed.

## **PROJECT MANAGEMENT**

The EnviroSmart Contract/Program Manager, Mr. Michael Costa, will communicate directly with the Resolution Consultants Project Manager, or designee, on issues regarding contract administration and resource allocation. Mr. Bryon Snow, EnviroSmart Project Manager, will be responsible for the day-to-day management and will communicate as required directly to EnviroSmart Contract/Program Manager. Mr. Snow will be responsible for the overall completion of the project and will direct the staff.

## **PROJECT STAFFING**

The Project Manager, Mr. Bryon Snow, will have the overall responsibility for managing budgets and scheduling, controlling project performance, managing project operation activities, and allocating resources. The Project Manager will remain onsite throughout the duration of the project and participate in all Resolution Consultants/Oversight Contractor meetings. The Project Manager is ultimately responsible for the design, administration, and safe implementation of the Work Plan, and will respond directly under the direction of Resolution Consultants technical representative, or designee.



The Health and Safety Officer, Mr. Tim Sloan, is responsible for developing and implementing the site-specific Health and Safety Plan. He is also responsible for review of site safety audits that will be completed and provided for approval if required. He will manage the day-to-day Health and Safety of the project team and their activities for the completion of the project. Mr. Sloan will not work at the project site, but will communicate directly with the Project Manager via teleconference calls as needed.

The Laborers, and other Support Personnel are responsible for implementation of field activities assigned to them by the Site Supervisor and/or Project Manager. This will also include the safe and proper operation of all equipment (pressure washers, pump sprayers, etc.) on site and are responsible for understanding and complying with the HASP.

EnviroSmart workers may be requested to work in a position higher or lower than originally tasked if deemed necessary by the Project Manager. All field personnel are responsible for conducting themselves in a safe manner, mindful of the inherent hazards associated with working around chemically contaminated materials, heavy equipment, and extreme environmental conditions.

## **PROJECT EXECUTION**

### **MITIGATION OF IMPACT TO SURROUNDING AREAS**

It is anticipated that associated decontamination activities will not disrupt businesses in the surrounding areas due to the low impact nature of the work. Resolution Consultants is responsible for all project coordination and planning with the on site tenant/property owner. This will not be the responsibility of EnviroSmart unless otherwise directed by Resolution Consultants.

### **MANPOWER AND RESOURCE PLANNING**

20131115 RESOLUTION CONSULTANTS\_WORKPLAN\_BLDG\_13.DOCX // P4 OF 9



The Project Manager will be in phone communications and direct communications during onsite activities regarding progress and support requirements for the project. If additional manpower and other resources are required, which indicate a significant increase in the cost of the project, the Project Manager will address the issue with Resolution Consultants immediately.

## **DELIVERABLES**

The Site Work Plan includes deliverables associated with the site activities for the decontamination activities. One (1) copy of the draft work plan is to be submitted to Resolution Consultants for approval prior to becoming a final document.

The Site Work Plan components/deliverables are as follow:

- Health and Safety Plan (HASP)- A Site-Specific Health and Safety Plan that details the various levels of personal protective equipment, air monitoring, sampling, decontamination, and emergency procedures will be provided for approval prior to commencement of work. This plan shall comply with all applicable federal, state and local laws/regulations including OSHA requirements 29 CFR 1910.120, and 1926.65.

## **MOBILIZATION**

EnviroSmart will mobilize all personnel, supplies and equipment necessary to complete this project. All personnel who are assigned to the project will have completed an OSHA 40-hour initial and annual 8-hour Refresher training in accordance with 29 CFR 1910.120 and will be participants in an approved medical monitoring program. EnviroSmart will maintain copies of OSHA 40-Hour Hazardous Waste training and 8-Hour Refresher Course training certificates for all assigned team personnel at the Command Post if required in writing by client. Furthermore, all on-site personnel will submit all necessary paperwork and receive proper access security badges prior to any mobilization activities.



The following EnviroSmart and subcontractor personnel will mobilize to the Site for initial startup and will change to complete the project as necessary:

<b>QUANTITY</b>	<b>PERSONNEL</b>
<b>1</b>	<b>Project Manager</b>
<b>4</b>	<b>Environmental Technicians</b>

The following equipment and supplies will be delivered to the site for implementation of site preparation, decontamination and disposal activities. Additional equipment may be moved on site as needed throughout the duration of the project.

<b>EQUIPMENT</b>		<b>Supplies</b>	
<b>2</b>	<b>Pickup Truck</b>		<b>Tyvek</b>
<b>1</b>	<b>Pressure washer</b>		<b>Respirators/cartridges</b>
	<b>Pump sprayers and other cleaning supplies</b>		<b>Cleaning agents (vinegar/baking soda)</b>

## **SITE PREPARATION**

Initial mobilization of site personnel and equipment/supplies will be completed to perform the following activities:

- Decontaminate laboratory equipment.
- Prepare waste for the proper transportation and disposal.



## **ESTABLISHMENT OF WORK ZONES**

A description of work zones at the BLDG 13 project site will be provided if necessary for the completion of the project. Demarcation of the zones will be accomplished with appropriate materials (signs, posts, colored or labeled tape, etc.) under the supervision of the Project Manager (see Section of Health and Safety Plan).

### **SUPPORT ZONE**

The Support Zone (SZ) will be deemed as the area where the Site Office Trailer is located and any other areas as deemed and delineated. Daily health and safety meetings will be conducted in this area to establish and control site changes and procedures.

### **CONTAMINATION REDUCTION ZONE**

The Contamination Reduction Zone (CRZ) will be established in such a way to allow access of critical material vendor deliveries without the need for entering the EZ. Personnel and equipment decontamination areas will be established in this zone as well. Heavy Equipment and personnel working within the EZ will be decontaminated before allowed to proceed to other areas of the CRZ.

### **EXCLUSION ZONE**

The EZ at the site will be delineated and defined as the limited area that is surrounded by adequate visual barriers. Personnel will only enter and exit the EZ through the CRZ (except in cases of site emergencies). Personnel will wear prescribed personal protective equipment (PPE) in the EZ. PPE requirements within the EZ may vary with regard to the activity being conducted, the area in which it is conducted and air



monitoring results. Only personnel who meet training and medical monitoring requirements may enter the EZ.

All sections of the site will be addressed. Physical hazards, in particular slip, trip, and fall and fire hazards will be mitigated prior to any site work or excavation being started. As needed, hazards will be demarcated and remediated to insure a safe working area. Safe ingress and egress points will be developed.

### **Laboratory Equipment Decontamination**

EnviroSmart has previously inventoried the remaining equipment within building 13 and will use this list to identify the equipment that needs decontamination. EnviroSmart will perform initial air monitoring to monitor for an explosive or oxygen deficient atmosphere. Air monitoring will take place in each room/floor where decontamination activities will take place. EnviroSmart will then utilize trained personnel to decontaminate all remaining laboratory equipment with the use of both chemical and physical means (it is not anticipated that mechanical means such as pressure washing will be needed for the decontamination activities).

EnviroSmart anticipates that a vinegar and/or baking soda solution will be sufficient to aid in the removal of contamination from the laboratory equipment. These solutions will be pre-mixed with water in a pump sprayer and directly applied to all exposed surfaces and wiped clean by hand. Every effort will be made to collect all decontamination fluids with the use of poly and absorbent materials. All generated waste from decontamination activities will be properly containerized and disposed of in a proper manner.

### **DISPOSAL OF LABORATORY WASTE**

EnviroSmart does not anticipate the use of heavy mechanical equipment to perform any decontamination/disposal activities. All waste containers (5 gallon buckets) will be transported by hand from the upper levels of building 13 and staged in a common area on the ground floor. EnviroSmart will then properly segregate,



containerize in drums and provide all necessary documentation (profiling/manifesting) for all laboratory waste indentified in building 13. EnviroSmart will provide transportation and disposal services of the waste to an approved disposal facility.

## **DEMOBILIZATION**

The following demobilization activities will be accomplished at the completion of the fieldwork:

- Verify all decontamination is complete
- Removal of all personnel, equipment, and materials originally mobilized to the site.

## **COMPLETION REPORT**

EnviroSmart will prepare and submit a Draft Project Completion Report to Resolution Consultants for review and comment, and then will generate a final report after incorporating the final comments. The report will include a summary of decontaminated equipment, project photographs, the quantities of waste generated, disposition of all waste, and all necessary transportation and disposal documentation generated during the project.







Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number <b>SCCESQG</b>	2. Page 1 of <b>2</b>	3. Emergency Response Phone <b>919-244-3109</b>	4. Manifest Tracking Number <b>000503832WAS</b>
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5. Generator's Name and Mailing Address  
**NAVY (BLDG. 13 FORMER CHARLESTON NAVAL COMPLEX**  
**203 S. DAVIS DR. BLDG. 247, JOINT BASE CHARLESTON, SC 29404 US PIPEFITTER STREET**

Generator's Site Address (if different than mailing address)

Generator's Phone: **(843) 722-0062** | **JOINT BASE CHARLESTON, SC 29404 USA**

6. Transporter 1 Company Name <b>ECOFLO, INC.</b>	U.S. EPA ID Number <b>NCD980842132</b>
7. Transporter 2 Company Name	U.S. EPA ID Number

8. Designated Facility Name and Site Address  
**ECOFLO, INC.**  
**2750 PATTERSON STREET** | **GREENSBORO, NC 27407 01**

Facility's Phone: **336 855-7925**

U.S. EPA ID Number  
**NCD980842132**

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
		No.	Type			
X	1. UN1978, PROPANE, 2.1, ERG#115  367AAB-001	001	CY	444.2	P	
λ	2. UN1950, WASTE, AEROSOLS, FLAMMABLE, (EACH NOT EXCEEDING 1 L CAPACITY), 2.1, ERG#126  367AAB-002	001	DF	444.5	P	D001
λ	3. UN1950, WASTE, AEROSOLS, FLAMMABLE, (EACH NOT EXCEEDING 1 L CAPACITY), 2.1, ERG#126  367AAB-003	001	DF	444.2	P	D001
X	4. UN1263, RQ, WASTE, PAINT RELATED MATERIAL, 3, II, (D001), ERG#128  367AAB-004	001	DF	444.10	P	D001

14. Special Handling Instructions and Additional Information

1 ) 2ECO-CYL-USCD DF 5 gal  
2 ) 12ECO-015 / 5  
3 ) 12ECO-015 / 5  
4 ) 12ECO-016 / 5

WC# 163423

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offoror's Printed/Typed Name: **Chad Trapp, Resolution Consultants, AS AGENT FOR NAVY** | Signature: *[Signature]* | Month: **3** | Day: **11** | Year: **14**

16. International Shipments  Import to U.S.  Export from U.S. | Port of entry/exit: | Date leaving U.S.: |

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: **Melvin Bivens** | Signature: *[Signature]* | Month: **03** | Day: **11** | Year: **14**

Transporter 2 Printed/Typed Name: | Signature: | Month: | Day: | Year:

18. Discrepancy

18a. Discrepancy Indication Space  Quantity  Type  Residue  Partial Rejection  Full Rejection

18b. Alternate Facility (or Generator) | Manifest Reference Number: | U.S. EPA ID Number:

Facility's Phone: | 18c. Signature of Alternate Facility (or Generator) | Month: | Day: | Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. <b>H141</b>	2. <b>H141</b>	3. <b>H141</b>	4. <b>H141</b>
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20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: **Marcus Moton** | Signature: *[Signature]* | Month: **3** | Day: **13** | Year: **14**

GENERATOR  
INT'L  
TRANSPORTER  
DESIGNATED FACILITY

MANIFEST (Sheet)	21. Generator ID Number <b>SCCESQG</b>	22. Page <b>2</b>	23. Manifest Tracking Number <b>000503832WAS</b>
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13 FORMER CHARLESTON NAVAL COMPLEX)

Company Name	U.S. EPA ID Number
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Company Name	U.S. EPA ID Number
--------------	--------------------

GENERATOR

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers		29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes	
		No.	Type				
5	UNIVERSAL WASTE - BULBS 367AAB-005	001	DF	44416	P		
6	UNIVERSAL WASTE - BULBS 367AAB-006	001	DF	44470	P		
7	NON HAZARDOUS, NON REGULATED 367AAB-007	001	DF	4420	P		
8	NON HAZARDOUS, NON REGULATED 367AAB-008	002	DF	4420	P		
9	NON HAZARDOUS, NON REGULATED 367AAB-009	001	DM	4420	P		
X	UN1789, Waste Hydrochloric Acid S, PG II 367AAB-1ab	001	DF	4442	P	D02	*

32. Special Handling Instructions and Additional Information

6 ) 2003-PA 155 (50)  
 7 ) CV6213 15  
 8 ) 23681-UWH 15  
 9 ) 23681-UWH 15

\*) see attached drums inventories sheet

TRANSPORTER

33. Transporter Acknowledgment of Receipt of Materials

Printed/Typed Name \_\_\_\_\_ Signature \_\_\_\_\_ Month \_\_\_\_\_ Day \_\_\_\_\_ Year \_\_\_\_\_

34. Transporter Acknowledgment of Receipt of Materials

Printed/Typed Name \_\_\_\_\_ Signature \_\_\_\_\_ Month \_\_\_\_\_ Day \_\_\_\_\_ Year \_\_\_\_\_

DESIGNATED FACILITY

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

H141 | H141 | H141 | H141 | H141

H141 | | | | |

ECOFLO RECEIVING OPERATING LOG

Work Order No.: 163423

Manifest No.	Work Order No.	TSDF	Profile	Approval	Process	Vault	Type	Cont No.	Manifest Lbs	Ecoflo Lbs	Gen Name	Gen EPA ID CD	Prof Name	Physical State	PH	Viscosity	Color	ADS	Comments	Checked
000503832WAS	163423	USC	367AAB-001	2ECO-CYL-U	SHIPMENT	FLAMMABLE	5 DF	1247410	2.00	5.00	NAVY (BLDG. 13 FORMER CHARLESTON N	SCCESQG	PROPANE	Semi-Solid	N/A	N/A	VARI	No		M1818
000503832WAS	163423	ECO	367AAB-002	12ECO-015	CONSOL	FLAMMABLE	5 DF	1247411	5.00	5.00	NAVY (BLDG. 13 FORMER CHARLESTON N	SCCESQG	AEROSOLS	Semi-Solid	N/A	N/A	VARI	No		M1818
000503832WAS	163423	ECO	367AAB-003	12ECO-015	CONSOL	FLAMMABLE	5 DF	1247412	2.00	4.00	NAVY (BLDG. 13 FORMER CHARLESTON N	SCCESQG	AEROSOLS INSECTICIDE	Semi-Solid	N/A	N/A	VARI	No		M1818
000503832WAS	163423	ECO	367AAB-004	12ECO-016	CONSOL	FLAMMABLE	5 DF	1247413	10.00	12.00	NAVY (BLDG. 13 FORMER CHARLESTON N	SCCESQG	PAINT/IPA	Semi-Solid	N/A	N/A	VARI	No		M1818
000503832WAS	163423	AER	367AAB-005	2003-PA	SHIPMENT	COMPATIBLE	5 DF	1247414	10.00	5.00	NAVY (BLDG. 13 FORMER CHARLESTON N	SCCESQG	MERCURY VAPOR BULBS	Solid	N/A	N/A	VARI	No	COMPACT OR CFL	M1818
000503832WAS	163423	AER	367AAB-006	2003-PA	SHIPMENT	COMPATIBLE	55 DF	1247415	70.00	55.00	NAVY (BLDG. 13 FORMER CHARLESTON N	SCCESQG	HOLLOW CATHODE BULBS	Solid	N/A	N/A	VARI	No	COMPACT OR CFL	M1818
000503832WAS	163423	PAL	367AAB-007	CV6213	BUNHLD	NON HAZ BLDG 3	5 DF	1247416	20.00	35.00	NAVY (BLDG. 13 FORMER CHARLESTON N	SCCESQG	OIL, LUBRICANTS, WAXES	Liquid	7	Low	VARI	No		M1818
000503832WAS	163423	RUW	367AAB-008	23681-UWH	BUNHLD	NON HAZ BLDG 3	55 DF	1247417	125.00	125.00	NAVY (BLDG. 13 FORMER CHARLESTON N	SCCESQG	EMPTY LAB GLASSWARE	Solid	N/A	N/A	VARI	No		M1818
000503832WAS	163423	RUW	367AAB-008	23681-UWH	BUNHLD	NON HAZ BLDG 3	55 DF	1247418	125.00	110.00	NAVY (BLDG. 13 FORMER CHARLESTON N	SCCESQG	EMPTY LAB GLASSWARE	Solid	N/A	N/A	VARI	No		M1818
000503832WAS	163423	RUW	367AAB-009	23681-UWH	BUNHLD	NON HAZ BLDG 3	55 DM	1247419	200.00	85.00	NAVY (BLDG. 13 FORMER CHARLESTON N	SCCESQG	AQUA TECTOR FREE WATER	Solid	N/A	N/A	VARI	No		M1818
000503832WAS	163423	ECO	367AAB-LAB	2ECO-LAB	LAB	ACID	5 DF	1247420	2.00	8.00	NAVY (BLDG. 13 FORMER CHARLESTON N	SCCESQG	LAB PACKS	Labpack	N/A	N/A	VARI	No	LABPACK	M1818



ECOFLO INC  
2750 PATTERSON ST  
GREENSBORO NC 2740  
Federal EPA ID#: NCD980842132

Navy (Bldg. 13 Former Charleston Naval Complex)  
203 S. Davis Dr Bldg. 247  
Joint Base Charleston, SC 29404

**CERTIFICATE OF COMPLIANCE**

ECOFLO Inc has received the shipment on 03/13/2014 as described on Manifest number #000503832WAS

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

---

Ray Dudley  
Manager, Safety and Compliance

Date: Marc 25, 2014

## Attachment C: Decontaminated Equipment Remaining On Site



EnviroSmart Inc.  
Bldg 13 Lab Waste Inventory

Inspection Date: 3/26/13

Small ≈ < 1 gal    Bckt = 1 gal-15 gal    DM = >15 gal

CONT. #	Chemical Name/Description	Manufacturer	Physical State	Quantity	Size	Container Type	How Full is the container?	Room #	On site or disposed
1	Floor Wax	Hillard Industrial	S (L) G	1	Small Bckt DM	Metal (Poly) Glass		122	Disposed
2	SAE 20 Oil for Press		S (L) G	1	Small Bckt DM	(Metal) Poly Glass		122	Disposed
3	Aquatechtor Dector Pad, Free water	DLA 120	(S) L G	96	(Small) Bckt DM	(Metal) Poly Glass		201A	Disposed
4	Hollow Cathode Lamps	Varian	(S) L G	60	Small Bckt DM	Metal Poly Glass		201,203	Disposed
5	Propane Canister		S L (G)	1	(Small) Bckt DM	Metal Poly Glass		201,203	Disposed
6	Unknown Clear liquid	In flask	S (L) G		(Small) Bckt DM	Metal Poly (Glass)		201,203	Disposed
7	LPG Fuel Refill	ERDCO	S L (G)		Small Bckt DM	(Metal) Poly Glass		206	Disposed
8	Evaporated Residue with lab glass		(S) (L) G		Small (Bckt) DM	Metal (Poly) (Glass)		206	Disposed
9	empty amber bottles		(S) L G	5-1 gal	(Small) Bckt DM	Metal Poly (Glass)	0%	301Z	Disposed
10	empty amber bottles		(S) L G	13 - 1 liter	(Small) Bckt DM	Metal Poly (Glass)	0%	301Z	Disposed
11	Water Displacement Lubricant	CSC 50	(S) L G	1	(Small) Bckt DM	(Metal) Poly Glass	1.5 aerosol	303	Disposed
12	Insecticide Pyrethrim	Bulk Chemical Dist. Inc.	(S) L G	1 - 12 oz can	(Small) Bckt DM	(Metal) Poly Glass	75% aerosol	303	Disposed
13	Great Day Enamel 204 Grey	Illinois Bronze Paint Co	(S) L G	1 - 13 oz can	(Small) Bckt DM	(Metal) Poly Glass	75% aerosol	303	Disposed
14	Otis Lubricants	Otis Elevator	(S) L G	1 - 1 gal	(Small) Bckt DM	(Metal) Poly Glass	Full	303	Disposed
15	Grey Paint	NA	(S) L G	1 - 1 gal	(Small) Bckt DM	(Metal) Poly Glass	Full	303	Disposed
16			S L G		Small Bckt DM	Metal Poly Glass			

EnviroSmart Inc.						Inspection Date: 3/26/13	
Bldg 13 Lab Waste Inventory							
Room #	Equipment Type/Description	Manufacturer	Serial #	Size/Type	Quantity	Contamination?	Equipment/material still on site
119	Vibration Isolation System	MicroGas G		4'x4'	1	No	On site/decontaminated
107/106/104	Fume Hood	Fisher Scientific			1	Yes-not very rusty	On site/decontaminated
107/106/104	Sinks			stainless steel/Chemical	3	No	On site/decontaminated
107/106/104	Eyewash Station				1	No	On site/decontaminated
107/106/104	Water Heater	GAR-RAY		24"x24"x20"	1	No	On site/decontaminated
102	Pressure Vessel			Fills Room	1	very clean, possible hydraulic oil but sounds empty	On site/decontaminated
Near 123,127	Electric Furnance	C.I. Hayes Inc	3710	Steel	1	No	On site/decontaminated
Near 123,127	Testing Machine (crush test?)	Tinius Olsen					On site/decontaminated
Near 123,127	Magnetic Particle Inspector Equipment	Magnaflux	GD-144/M2671366			No	On site/decontaminated
128	Sink					No	On site/decontaminated
201A	Automatic Flow	OS-04			1	No	On site/decontaminated
201A	Aquatest 8	Photobolt			1	No	On site/decontaminated
201A	Oil Quality Analyzer	Northern Instruments	1158		1		On site/decontaminated
201A	Fume Hood				1		On site/decontaminated
201A	Beckman Bath	LS1700			1		On site/decontaminated
201A	Electronic Balance	EB 25			1		On site/decontaminated
201A	CS 46 Carbon/Sulfur Determinator	Leco Corp			1		On site/decontaminated
201A	Pressure Gauge		Prop of USNAVY	4'x2'x2' steel box	1		On site/decontaminated
201A	10" Remote Recorder	Beckman	15082317		1		On site/decontaminated
201A	Atomcomp	Jarrell-Ash	Model 750		2		On site/decontaminated
201A	Nitrogen/Oxygen Determinator	Leco Corp	Model TC 436		1		On site/decontaminated

EnviroSmart Inc.

Inspection Date: 3/26/13

## Bldg 13 Lab Waste Inventory

Room #	Equipment Type/Description	Manufacturer	Serial #	Size/Type	Quantity	Contamination?	Equipment/material still on site
201A	Electrode Furnace	Leco Corp	Model EF400		1		On site/decontaminated
201A	Duomet II Belt Surfacers				1		On site/decontaminated
201A	Misc. Valves/Gauges				1		On site/decontaminated
201A	Portable Trace Oxygen Analyzer	Teledyne	Model 311		1		On site/decontaminated
205	Autoprep Chromatograph	Varian	30		1	No	On site/decontaminated
205	Flow Meter	Varian	BK010030		1	No	On site/decontaminated
205	GC Columns - Fused Silica						On site/decontaminated
205	GC Column			Stainless Steel	1		On site/decontaminated
205	Autosampler	Varian	Model 8085		1		On site/decontaminated
205	Universal Sampling Pump	MSA		8"	1		On site/decontaminated
205	Misc glass syringes, beakers, tubs					No	On site/decontaminated
205	Solvent Flame Locker			Metal		No	On site/decontaminated
210	Centrifuge	International Equipment Co	42828634		1	No	On site/decontaminated
210	Field Monitors for Field Analysis	Millipore	MAWP037P0	3 boxes of 48(pond Filters)	1	No	On site/decontaminated
210	Ferrograph Fluid Analyzer System	Foxboro			1	Possible	On site/decontaminated
201, 203	Misc empty glass/plastic containers						Went for Disposal
201, 203	Tubing						On site/decontaminated
206	Unknown Clear liquid			250ml Glass	1		Went for Disposal
206	LPG Fuel Refill	ERDCO		Metal	1		On site/decontaminated
206	Evaporated Residue with lab glass			Glass	1		On site/decontaminated
206	Oil Analyzer	Baird	CG285		1		On site/decontaminated

EnviroSmart Inc.

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Bldg 13 Lab Waste Inventory

Room #	Equipment Type/Description	Manufacturer	Serial #	Size/Type	Quantity	Contamination?	Equipment/material still on site
206	Lektriber 100	Sperry Remington			1		On site/decontaminated
206	Oscilloscope	Hewitt Packard	6276		1		On site/decontaminated
206	Ignition Transformer	Jefferson Electric	628-171		2		On site/decontaminated
206	PH Meter	Fischer Scientific	3059/1364		2		On site/decontaminated
206	Lab Controller	Curtin Matheson Scientific	1487		1		On site/decontaminated
206	Time-It Timer	Precision Scientific	69230		5		On site/decontaminated
206	Muffle Furnace	Blue M Elec. Co	5380		1		On site/decontaminated
206	Kjeldah Tester	Precision Scientific			1		On site/decontaminated
206	Sampler Charger	Mettler ST20	M763436		1		On site/decontaminated
206	Titrator	Mettler DL21			1		On site/decontaminated
206	Oven	Precision Thelco	Model 27		1		On site/decontaminated
206	Flashpoint ERCO Rapid Tester				1		On site/decontaminated
206	Fiaspoint Tester	Pensky-Martens			1		On site/decontaminated
206	Cleveland Open Cup Tester	GCA Precision Scientific			1		On site/decontaminated
206	Porta-Temp	Precision Scientific	15AU8		1		On site/decontaminated
206	Temperature Adjuster	Fischer			1		On site/decontaminated
206	Melting Pot	Waage	WP8A		1		On site/decontaminated
206	Photobolt Aquatest 8	Photobolt	1898		1		On site/decontaminated
206	Muffle Furnace	GCA Precision Scientific	11AC11		1		On site/decontaminated
206	ASTM Colormeter	Fischer Scientific			1		On site/decontaminated
206	Glas-Col Shaker-in-the-round	Apparatus Company			1		On site/decontaminated

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Bldg 13 Lab Waste Inventory

Room #	Equipment Type/Description	Manufacturer	Serial #	Size/Type	Quantity	Contamination?	Equipment/material still on site
206	Oven	Modern Scientific Research & Process	10S8		1		On site/decontaminated
206	Seta Flash Tester	ERDCO			3		On site/decontaminated
206	Free Water Detector	Spectronics Corp	772181		1		On site/decontaminated
206	Flash Point Tester	Precision Scientific	11AM4		1		On site/decontaminated
206	Heater	GCA Precision Full-kon-trol			1		On site/decontaminated
201, 203	Sealer Jaws	Clamco Corp	253B		2		On site/decontaminated
201, 203	Illuminator	Fischer Scientific	1201		1		On site/decontaminated
201, 203	High Temp Electric Furnace	Burrel	1129		1		On site/decontaminated
201, 203	Muffle Furnace	Blue M	GFV879		2		On site/decontaminated
201, 203	Furnace/Lab Hood			Metal	3	Perchloric Acid	On site/decontaminated
201, 203	Hot Plate	Thermolyne 2200			1		On site/decontaminated
201, 203	Corrosives Locker			Metal	1		On site/decontaminated
201, 203	Electrolite Analyzer	EH Sargeant & Co	Navy 134199927		1		On site/decontaminated
201, 203	Sinks				3	Drains?	On site/decontaminated
201, 203	Titration	Perkin Elmer	2830		1		On site/decontaminated
201, 203	Power Supply	Perkin Elmer	110445		1		On site/decontaminated
201, 203	Ignition Unit	Parr Instrument			2		On site/decontaminated
201, 203	Burner Control	Perkin Elmer			1		On site/decontaminated
201, 203	Hot Plate	VWR			1		On site/decontaminated
301Z	Beckman C-20	Black Box	ELT C3	6"x10"x4"	1		On site/decontaminated
301Z	Beckman C-6	Grey Box	25780	5"x12"x3"	1		On site/decontaminated

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Bldg 13 Lab Waste Inventory

Room #	Equipment Type/Description	Manufacturer	Serial #	Size/Type	Quantity	Contamination?	Equipment/material still on site
301Z	Box of round mirrors	Grey Box		3"x14x3"	1		On site/decontaminated
301Z	Chloride Swipe Kit	Grey Metal Box		8x8x4	1		On site/decontaminated
301Z	Meter Pump	Watts	101258110	12'x6"	1		On site/decontaminated
301Z	Fume Hood				2		On site/decontaminated
301Z	Muffle Furnace				1		On site/decontaminated
301Z	Sink				2		On site/decontaminated