

PREPARED FOR DEPARTMENT OF THE

AIR FORCE

BY

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TECHNICAL PROVISIONS & SPECIFICATIONS FOR:

PROJECT QUUG 04-1006

DEMO BUTT FIRING-IN BUILDING 1202

Prepared and approved by: _____
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LIST OF SPECIFICATIONS

DIVISION 1 GENERAL REQUIREMENTS

- 01000 Scope of Work, Drawings and Special Conditions
- 01011 General Conditions
- 01450 Quality Control

DIVISION 2 SITE WORK

- 02111 Excavation & Handling of Contaminated Materials
- 02220 Demolitions

DIVISION 3 -17 – NOT USED

Attachment:
Schedule of Material Submittals

SECTION 01000

SCOPE OF WORK, DRAWINGS AND SPECIAL CONDITIONS

1. SCOPE OF WORK

The work includes, but is not limited to, the following items:

- Demolition of an aircraft butt firing-in bunker. The facility is a square reinforced concrete building of about 19 meter long, 15 meters wide and 14 meters high.
- It is partially covered outside with a topsoil type of earth mound which shall have to be removed.
- The interior contains granular filling type soil which will also have to be carried away.
- Exterior side wooden wings for soil contention are also to be demolished and hauled off Base to an authorised Landfill.
- The exterior front area at ground level, and part of the interior filling, contain lead and brass metal bullets and cartridges. These metals pieces and associated soil shall have to be handled as solid wastes or residues and will be disposed of and deposited in authorized Landfill. Laboratory analysis and certificates will have to be produced in order to fulfill all applicable environmental codes.
- The site work is located in C Avenue and 11th Street as shown in drawings.
- Final cleaning.
- Delivery of As-Built drawings and specified certifications.

2. PERFORMANCE PERIOD

The performance period proposed for the execution of this project, 150 calendar days, is for information purpose only. The Contractor shall provide the performance period with the proposal. The Contractor's Performance period will be considered in the evaluation of acceptable proposals.

3. DRAWINGS

<u>No. of Drawing</u>	<u>Sheet</u>	<u>Date</u>	<u>Drawing Ref.</u>	<u>Title</u>
	1 of 10	4 FEB 2009	001	Cover Sheet, Drawing Schedule
	2 of 10	4 FEB 2009	C-100	General Notes
	3 of 10	4 FEB 2009	C-200	Existing Conditions – Topography
	4 of 10	4 FEB 2009	C-201	Finished Grading Plan
	5 of 10	4 FEB 2009	C-202	Demolition Sequence
	6 of 10	4 FEB 2009	C-300	Existing Conditions Plan and Sections
	7 of 10	4 FEB 2009	C-301	Sections
	8 of 10	4 FEB 2009	C-302	Sections
	9 of 10	4 FEB 2009	S-100	Foundation and Structure Plan
	10 of 10	4 FEB 2009	S-101	Target Slot, Section and Wood Cribbing Detail

4. GOVERNMENT-FURNISHED MATERIAL (GFM)

Not Applicable

5. EQUIPMENT, CONTROLS, AND MATERIAL OF THE UNITED STATES OF AMERICA

Not Applicable

6. CERTIFICATION OF CLASSIFICATION

Bidders and/or their subcontractors must hold an updated Certificate of Classification issued by the "Registro Oficial de Contratistas de Obras del Estado" of the "Ministerio de Economía y Hacienda" covering the following groups, subgroups, and categories.

<u>Group</u>	<u>Subgroup</u>	<u>Category</u>
A	1 & 2	C
C	1	C

7. SPECIAL REQUIREMENTS

7.1 Names of Subcontractors

Twenty days after contract award, the Contractor shall submit for approval the names of the following Subcontractors who will take part in the Project:

- a. Hazardous Waste Manager (Gestor de Residuos Peligrosos) according to Law 10/1998, of April 21, regarding Wastes (Ley de Residuos).
- b. Registered Collaborating Consultant of the Junta de Andalucía's Environmental Council (Entidad Colaboradora de la Consejería de Medio Ambiente en materia de Protección Ambiental, ECCMA) complying with Decreto 12/1999, of January 26.

*** END OF SECTION ***

SECTION 01011

GENERAL CONDITIONS

1. GENERAL: The work consists of furnishing all labor, materials, plant, transportation, equipment, and services to complete the project described in Section 01000, Scope of Work, Drawings and Special Conditions, in accordance with the drawings and specifications, complete and ready for use by means of a firm fixed price construction contract. Measurements given in the drawings and specifications are given for reference use only. It is the Contractor's responsibility to verify any and all of said measurements.

2. GENERAL DESCRIPTION: The work consists in, but is not limited to, executing the line items indicated in the scope of work. All line items indicated in the scope of work do not limit or reduce the Contractor's responsibility to perform all work as required by the project in order to provide a complete and operable facility.

3. LOCATION: The work is located in Morón Air Base, Spain, as shown on the contract drawings.

4. DRAWINGS ACCOMPANYING SPECIFICATION: The drawings accompanying this specification are a part thereof. Drawings are the property of the Government, and shall not be used for any purpose other than that contemplated by the specification. The drawings included in this specification are similar to A1.

5. BASE ACCESS:

5.1 Permits or Authorizations: The Contractor shall obtain all permits or authorizations to access Morón Air Base. Once the works have finalized, the Contractor will return the permits or authorizations.

5.2 Delays and Interruptions: Contractors are advised that due to security reasons, during the access/egress process of personnel and materials from the Morón Air Base delays are liable to occur. Additionally, the Contractor shall immediately interrupt work when required to do so if security warning/alarm situations occur.

6. WORK CLEARANCE REQUEST: The Contractor shall request AF Form 103 "BCE Work Clearance Request" in order to obtain all the information pertaining to the current status of general utilities. Requests shall be processed through the Contracting Officer or authorized representative, minimum of 5 duty days beforehand. The Contractor shall not perform any excavation works under any circumstances without an approved Work Clearance

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Request at the work site (hard copy). Work Clearance Request will only be processed once all materials and documentation necessary to commence work have been submitted and approved. The Contractor shall be held responsible for any damage caused to general utilities indicated on the AF Form 103 and related drawings and shall be repaired at no additional cost to the Government of the United States.

7. BASE UTILITIES:

7.1 Use of Base Utilities: Base utilities are available to the Contractor at no additional expense to the Contractor. The following utilities shall be available from the existing Base utility connections in reasonable quantities:

- a. Electricity 120/208 volts, 60 Hz.
- b. Non-potable water.

Connection requests shall indicate the type of utility service required, type of connection and disconnection, utility service use and maximum duration. All connection and disconnection works for Base utilities shall be programmed during normal Base personnel operating hours. It shall be the Contractor's responsibility to effect the connections and disconnections and shall reimburse costs incurred in the connection, disconnection, conversion, transportation of Base utility services to the work site, including providing the mechanisms that avoid water from flowing back into the system (backflow preventers) and furnishing and installing the necessary transformers. The Contractor shall not activate or alter any control device of the system of the utility services, including water, sewage and electricity. Control devices will be Government operated. The Contractor shall notify the Contracting Officer or authorized representative 5 duty days prior to any connection, disconnection or manipulation of the control system of the utility services required. Temporary overhead connections to utility services are prohibited. All systems shall be restored to their original condition prior to satisfying final contractual payments.

7.2 Base Utility Outages: Utility outage requests shall indicate the type of outage to be performed, the scope of work and the maximum duration. All utility outages shall be programmed during normal Base personnel operating hours. The Contractor shall not activate or alter any control device of the system of the utility services, including water, sewage and electricity. Control devices will be Government operated. The Contractor shall notify the Contracting Officer or authorized representative 5 duty days prior to any connection, disconnection or manipulation of the control system of the utility services required. Temporary overhead connections to utility services are prohibited. All systems shall be restored to their original condition prior to satisfying final contractual payments.

8. HOT WORK: The Contractor shall submit for approval a written request to the Contracting Officer or authorized representative 5 days prior to any welding, oxyacetylene or plasma cutting work. Said request shall indicate welding procedures and fire prevention

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measures. All welding work performed during the project shall be carried out by qualified welders only. The copies of the welding certificates, issued by an approved agency, shall be kept in the construction inspector's files.

9. VEHICULAR TRAFFIC, MACHINERY AND EQUIPMENT:

9.1 Traffic Control: All works which require vehicular or pedestrian traffic disruptions on the Base shall require an approved transit control plan. Said plan shall be approved at least 7 days prior to carrying out said disruption. Said plan shall include the date, duration, proposed alternative routes, signs, barriers, cones and/or flagmen. The Contractor shall establish alternate procedures should unforeseen circumstances take place. The responsibility of furnishing, erecting, maintaining and removing all signs, barriers, cones and flags shall be solely the Contractor's. Once the work is completed, the Contractor shall remove the signaling elements such as barriers, cones and/or flags.

9.2 Access Routes: The Contractor shall submit a plan for the access routes which shall be approved by the Contracting Officer or authorized representative.

9.3 Trucks: Trucks loaded with loose material (air borne dust, construction debris or other objects that could fall from them), shall be duly covered. Said covers, such as tarps, shall be fastened over the load prior to accessing the adjacent roads.

10. PROGRESS SCHEDULE: (See solicitation/Contract FAR clause 52.236-15, Schedules for Construction Contracts, Apr 1984). The Contractor shall, within five days after the work commences on the contract or another period of time determined by the Contracting Officer, prepare and submit to the Contracting Officer for approval three copies of a practicable schedule showing the order in which the Contractor proposes to perform the work, and the dates on which the Contractor contemplates starting and completing the several salient features of the work (including acquiring materials, plant, and equipment). The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the period. If the Contractor fails to submit a schedule within the time prescribed, the Contracting Officer may withhold approval of progress payments until the Contractor submits the required schedule.

11. MOBILITY PLAN: The Contractor shall submit a mobility plan to the Contracting Officer or authorized representative for approval. Said plan shall propose the location and surface of the work site, offices and material staging and storage areas. The Contractor shall submit the plan 5 duty days prior to commencing work. The Contractor shall include in the mobility plan the proposed system to supply the required utility services required at each site.

11.1 Construction Site Fencing: Construction sites, offices, latrines, material staging and storage areas shall be fenced in by means of a two meter high fence to include gates and locks,

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unless otherwise approved the Government of the United States. The type of fencing, height and color shall be specified in accordance with the Contracting Officer or authorized representative's criteria. Fences shall be screened with green opaque screening material to prevent visibility inside the fenced area. Fencing shall be completely secured at top and bottom to prevent access. Fences and screens shall be adequately staked and/or anchored to prevent blowing over during high wind conditions. The Contractor shall include in the Mobilization Plan photos, catalogs or samples of the screening material. The Contractor shall not install the fencing or screening materials until approval, in writing, has been granted from the Contracting Officer or authorized representative. The responsibility of providing, erecting, maintaining and removing the fencing shall be solely the Contractor's. The Contractor shall replace or repair, within the following 24 hours or as determined by the Contracting Officer or authorized representative, all fence or screening sections which have been damaged or deteriorated. Once the works have been finalized, the Contractor shall remove the fencing.

11.2 Offices: Temporary prefabricated buildings required for administrative reasons (office space, conference room and break room) shall be in good conditions. Temporary prefabricated buildings requiring paint, repairs or are in bad conditions shall not be allowed at the site. Said temporary prefabricated buildings shall include on the outside a plaque, 0.5 x 0.5 meters maximum dimensions, indicating the name of the company and telephone number (s) of the person (s) designated as POC for the Contractor 24 hours a day. Once the works are finalized, the Contractor shall remove the temporary prefabricated buildings.

11.3 Latrines: Prefabricated temporary buildings required as latrines for personnel shall be in good conditions. The prefabricated temporary buildings requiring paint, repairs or are in bad conditions shall not be allowed on the work site. These facilities shall be kept in perfect using conditions and sanitized, shall be treated for insects and shall be emptied once a week and cleaned with a detergent suitable for sanitary use. The frequency of emptying and cleaning shall be adjusted according to needs. The facilities shall be located no less than 50 meters from the existing buildings on Base if they cannot be located near a sewage manhole. Once the works have been completed, the Contractor shall remove the temporary facilities and shall leave the area clean and sanitized.

11.4 Parking: The Contractor, their employees and subcontractors shall park all vehicles, including heavy machinery, equipment or vehicles, in areas where they do not pose an obstruction in the corresponding work site. All possible efforts must be made so that the vehicles are not parked in an area where they will be clearly visible from the outside.

11.5 Material Storage: Storage containers will be in good conditions. The storage of materials at the work site shall be at the Contractor's own risk. The use of private security guards at the work site shall require Spanish Air Force Security Forces approval. The Contractor shall not use the work site to store material previously approved by the Contracting Officer or authorized representative. Once the works have finished, the Contractor shall remove the excess

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stored material.

11.6 Project Sign: The Contractor shall install an identifying project sign in accordance with Figure 1 no later than one day after the work site fencing has been installed. The sign shall be mounted on two wooden posts 10 cm x 10 cm, fastened to the ground and adequately anchored. The location of said sign shall be determined by the Contracting Officer or his representative. During final cleanup of the work site, the sign, posts and anchoring elements shall be removed. Unless otherwise specified, the sign shall have a white background and the lettering shall be dark blue.



FIGURE 1 - : PROJECT SIGN

12. QUALITY CONTROL PLAN: The Contractor shall submit a comprehensive Quality Control Plan 5 duty days prior to commencing work. The plan shall contain at minimum the following:

1. Names and Qualifications for any proposed Quality Control Manager or Inspectors.
2. Reporting Responsibility.
3. Inspection Procedures. This should include types and frequencies of inspections and procedures for failed or unsatisfactory inspections. (See 13.3.9 for Government Inspection Requirements).
4. Inspection Reporting. Submit copies of all inspection reporting forms, including Specific (HVAC, Plumbing, framing, Electrical, HVAC etc.), Daily and Weekly reporting.

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5. List of planned 'Hold Inspection Points' with the estimated dates from the construction schedule.
6. Request for Information (RFI) Submit the proposed RFI Form and RFI Log Form to be used. This will be used to submit and track any RFI's during construction.
7. Material Testing: Submit the name and qualifications for any Testing Agency or Laboratory planned for testing. All testing reports shall be submitted in a timely manner for review and approval. Should any test report fail, follow-on work is not to proceed until after the failure has been corrected. It is the responsibility of the QC Manager to ensure that all reports have been reviewed and the necessary action taken to resolve any failed testing.

12.1 Acceptance of the Construction Quality Control (QC) Plan: Acceptance of the QC Plan is required prior to the start of construction. The Contracting Officer reserves the right to require changes in the QC Plan and operations as necessary, including removal of personnel, to ensure the specified quality of work.

13. WORK DAY:

13.1 Normal Work Hours: The Contractor shall perform all work during normal working hours unless a special authorization is issued by the Contracting Office representative to deviate from said work schedule. Normal working hours shall be from 0800 to 1700, from Monday to Friday, with the exception of holidays.

13.2 Work Outside Normal Hours: If the Contractor wishes to work outside the normal hours of operation, Saturdays, Sundays, or holidays, he shall submit an application to the Contracting Officer. The Contractor shall submit the request 5 duty days ahead of time as minimum.

14. CONSERVATION AND MAINTENANCE:

14.1 Conservation and Maintenance of the Existing Facilities: The contractor shall conserve and protect all existing facilities at the work site or adjacent to it which shall not to be removed or affected by the work required under this contract. The Contractor shall restore, at no additional cost to the Government of the United States of America, the facility affected during the execution of works to its original condition, before final acceptance of the project.

14.2 Conservation and Maintenance of the Existing Vegetation: The Contractor shall conserve and protect the existing vegetation (trees, shrubs, grass) on or adjacent to the work site, which shall not to be removed and which do not interfere with the work required under this contract. The contractor shall only remove trees or shrubs when specifically indicated in the drawings and specifications and shall avoid damaging the rest of vegetation. If any limbs or

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branches of trees are broken during contract performance due to the careless operation of equipment or the carelessness of the workmen, the contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound. The contractor shall cut the grass or vegetation in the work site so that it does not exceed 10 cm in height. The Contractor shall restore, at no additional cost to the Government of the United States of America to their original state all areas disturbed during construction to their original condition before final acceptance of works under this project.

15. CLEANING AND MAINTENANCE:

15.1 Housekeeping and Site Cleanup: The Contractor shall dispose of accumulated debris, waste materials and rubbish and shall keep the site in order. All rubbish and waste materials shall be removed daily and shall be placed in contractor furnished containers and shall be removed on a daily basis to an authorized dump off-Base as the project progresses. Contractors shall ensure all light weight debris at the construction site is properly secured in waste receptacles so that it does not blow to another area or onto the airfield. Once the works are finished, the Contractor shall remove the containers.

15.2 Cleaning and Maintenance of Access Routes: The Contractor shall be solely responsible for any material dumped/spilled by trucks, vehicles and machinery or equipment on the access routes. Said material shall be immediately removed by the Contractor. The Contractor shall be responsible for assuring that all access routes shall be kept clean and clear at all times. No amount of debris whatsoever will be tolerated on the access routes

15.3 Waste and Construction Debris: The Contractor, once the project has been completed, shall submit a report to the Chief of Construction Management with the estimated amounts or waste and construction debris managed during the execution of the project.

16. HAZARDOUS MATERIAL: Before transporting any type of hazardous material, the Contractor shall contact the Chief of Construction Management to coordinate handling and storage. The Contractor shall be responsible for complying with all applicable environmental rules and regulations concerning handling, transportation and storage of materials and/or dangerous waste.

17. NOISE CONTROL: The Contractor shall comply with all applicable municipal and state regulations and all bylaws and norms pertaining to noise control, applicable on or off Base.

18. SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION: (See Solicitation/Contract FAR clause 52.236-21, Specifications and Drawings for Construction, Feb 1997).

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18.1 Maintenance and Updating of As-Built Drawings and Specifications: The Contractor shall keep two sets of specifications and prints, regular size, which shall show neatly and clearly marked in red all approved variations between the actual construction and the contract documents. The As-Built drawings shall be kept up-to-date at the work site at all times during the contract.

18.2 Availability and Review of As-Built Drawings: As-Builts shall be available for inspection by the Contracting Officer or his authorized representative. Upon completion of work, a complete set of As-Built drawings shall be submitted to the Contracting Officer for final review. A hard copy of the As-Built drawings will be submitted marked in red and signed by project inspection. The Contracting Officer shall provide comments and/or approval within the following two weeks from the submittal.

18.3 Submittal of As-Builts: After final review and once the As-Built drawings have been approved, the Contractor shall have two weeks to submit a complete set of As-Builts and a CD in AutoCad, Version 2004, of said drawings. The name of the drawing files on the CD shall correspond to the drawing numbers of the hard copies. The CD shall be labeled as follows:

- Project Name and Number.
- Date.
- Contract Number.
- Contractor Name.

19 SITE INVESTIGATION AND CONDITIONS AFFECTING WORK: The Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of the work, and that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to... see Solicitation/Contract FAR clause 52.236-3, Site Investigation and Conditions Affecting the Work, Apr 1984.

20. PERMITS AND RESPONSIBILITIES: The Contractor shall, without additional expense to the Government, be responsible for obtaining any necessary licenses and permits, and for complying with any Federal, State, and municipal laws, codes, and regulations applicable to the performance of the work. The Contractor shall also be responsible for all damages to persons or property that occur as a result of the Contractor's fault or negligence. The Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire work, except for any completed unit of work which may have been accepted under the contract. (See Solicitation/Contract FAR clause 52.236-7, Permits and responsibilities, Nov 1991)

21. CONTRACTOR AND SUBCONTRACTOR PERSONNEL:

21.1 Superintendent: The Contractor shall directly superintend the work or assign and have on the worksite a competent superintendent who is satisfactory to the Contracting Officer

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and has authority to act for the Contractor. The superintendent must be able to effectively answer technical questions related to the project and effectively manage the work.

21.2 **English Speaking Representative:** At all times during the execution of any work, the Contractor shall have a representative present on site capable of explaining the work operations and receiving instructions in English. The Contracting Officer or authorized representative shall have the right to determine, without appeal of such decision, whether the proposed representative has the linguistic capability or not, in which case, said representative shall be replaced immediately by another previously approved by the Contracting Officer or his authorized representative.

21.3 **Personnel Listing:** The Contractor shall submit a list of key personnel and subcontractor personnel to include personal addresses and phone number for emergency contact purposes. As changes occur and additional information becomes available, the Contractor shall correct the information contained in the previously submitted lists.

21.4 **Personnel Transit On-Base:** Personnel working on the Base shall keep to the work site and shall transit using the approved access routes. The personnel shall keep off restricted areas unless the pertinent authorization is issued.

22. **PUBLIC RELEASE OF INFORMATION:** The public release of information or photographs concerning any aspect of the materials or services related to this bid, purchase order or other documents resulting thereof without prior written approval from the Contracting Officer.

23. **SAFETY PROGRAM:**

23.1 **Safety Plan:** Prior to commencement of work, the Contractor shall submit a Safety Plan to the Contracting Officer in writing. The safety plan shall be subject to approval by the Contracting Officer or his authorized representative. The work site Safety Plan shall identify safety and health risks of the workers and shall propose the necessary preventive measures for each unavoidable risk in order to protect the physical integrity of the workers and minimize material damage to the facility. Fire prevention measures shall be indicated for those works which involve a fire risk. The Contractor shall provide fire extinguishers for hazardous works in which fire or a fire risk is involved. Avoidable risks shall be eliminated. Preventive measures shall be preferably collective in nature. Those risks for which, technically, collective preventive measures do not apply shall allow the use of Personal Protection Equipment. The Contractor shall list the contents of the First Aid Kit in the Safety Plan.

23.2 **Standard Regulations:** The contractor shall execute the Safety Plan in accordance with the corresponding State, Autonomous Community, Province and Municipal legislation. The program shall include, but not be limited to, the following:

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- “Occupational Safety and Health as of 1970, Public Law 91-596, 91 Congress, S.2193, 29 December 1970.
- "Public Law Amendment 91-596, 101-552, 3101, 5 November 1990.
- “Ley 31/95, 8 November, Risk Prevention”.

Royal Decree 1316/1989, 27 October, relative to protection for workers exposed to noise risks during the execution of work.

Royal Decree 363/1995, 10 March, Regulation for notification of new substances and classification, container and labeling of hazardous substances.

Royal Decree 485/97 14 April, on work site warning signs.

Royal Decree 486/97, 14 April, work sites.

Royal Decree 487/97, 14 April, handling heavy loads.

Royal Decree 488/97, 14 April, screens.

Royal Decree 664/97, 12 May, biological agents.

Royal Decree 665/97, 12 May, cancerous agents.

Royal Decree 773/97, 30 May, Individual Protective Equipment.

Royal Decree 1215/97, 18 July, work equipment.

Royal Decree 1627/97, 24 October, Occupational Safety and Health regulations regarding construction works.

Royal Decree 1942/1997, 5 November, Regulation on the installation of protection against fires.

31 October 84, regulation approved relative to working with Risk of Asbestos.

23.3 Base Regulations: The Contractor, his employees and subcontractors shall become familiar with and comply with all Base rules and regulations including fire, traffic and security regulations.

23.4 Excavations and Hazardous Areas: Excavations and all areas considered hazardous

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by the Government of the United States of America shall be protected by suitable barriers, lights and beacons (flags, cones, boards). Warning lights (portable lamps IP-44 minimum) or safety signal lights shall be installed by the Contractor. The Contractor shall pay for any damage resulting from his own negligence. The responsibility of supplying, erecting, maintaining and removing all barriers, lights, beacons, warning lights and safety lights shall be solely the Contractor's. Once the works have finalized, the Contractor shall remove all signaling elements such as barriers, lights and beacons.

23.5 Burning and Explosives: Burning practices and use of explosives without prior written authorization from the Government of the United States of America is prohibited.

24. ASBESTOS: The use of asbestos containing materials is prohibited.

25. CELL PHONE AND RADIO TRANSMITTER RESTRICTIONS: Under no circumstances shall radio transmitters or cell phones be used without prior approval from the Government of the United States of America.

26. WEATHER PROTECTION: The Contractor shall take the necessary precautions to protect the work site, facilities, equipment and materials from weather, to include those furnished by the Government or Government Property. It shall be the Contractor's responsibility to be aware of weather forecasts and to take the necessary protective measures. Prior to commencing any work, the Contractor shall have at the site the material (tarpaulins, etc) or necessary equipment to protect the site, facilities, equipment and materials exposed to rain, wind, or other natural events. Required tarpaulins shall not be light plastic, the thickness shall be enough as to assure that the weight of accumulated water does not exceed the resistance of the tarpaulin, thus tearing it. The Contractor shall be responsible for damage caused due to lack of protection against the weather.

27. MATERIAL AND/OR EQUIPMENT SUBMITTALS:

27.1 Submittals Required: The Contractor shall submit the documentation or samples indicated in the Form "Schedule of Material Submittals" for each material or equipment.

27.2 Submittal Procedure: The Contractor shall attach AF Form 3000 "Material Approval Submittal" to the documentation or sample of material or equipment submitted. The Contractor shall fill in all the necessary fields of AF Form 3000. The Contractor shall turn in AF Form 3000 and the documentation or sample of the material or equipment to the Contracting Officer within the time frame indicated in the document "Schedule of Material Submittals" for approval prior to commencement of any type of work. The Contracting Officer shall return the AF Form 3000 indicating if said submittal has been approved or not. If the Contracting Officer has not approved the submittal, the Contractor shall provide a new submittal.

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27.3 AF Form 3000: The Contractor shall create said form.

28. MATERIALS AND/OR EQUIPMENT:

28.1 Material and/or Equipment Purchase Order: Once the Contractor has received approval from the Contracting Officer for the submittal, the Contractor shall proceed with the purchase order for the approved equipment or material.

28.2 Delay in the Delivery of Materials and/or Equipment: Delays in the delivery of materials and/or equipment shall not justify an extension in the performance period of the contract.

29. COMMENCEMENT OF WORK: Once all the required materials and/or equipment are available for use, the Contractor shall proceed to commence the works. If the Contractor wishes to commence works without all materials and/or equipment on site, he shall request authorization from the Contracting Officer.

*** END OF SECTION ***

SECTION 01450
QUALITY CONTROL

PART 1 GENERAL

1.1 REFERENCES

Not used

1.2 PAYMENT

Separate payment will not be made for providing and maintaining an effective Quality Control Program. All associated costs will be included in the Base Bid.

1.3 SUBMITTALS

Quality Control Plan

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

The Contractor shall establish and maintain an effective quality control (QC) system. QC consists of plans, procedures, and organization necessary to produce an end product which complies with the contract requirements. Cover all design and demolition operations, both onsite and offsite, and be keyed to the proposed demolition design and sequence. The project superintendent will be held responsible for the quality of work and is subject to removal by the Contracting Officer for non-compliance with the quality requirements specified in the contract. In this context the highest level manager responsible for the overall construction activities at the site, including quality and production is the project superintendent. The project Superintendent must maintain physical presence at the site at all times and is responsible for all construction and related activities at the site, except as otherwise acceptable to the Contracting Officer.

3.2 QUALITY CONTROL PLAN

Submit no later than 20 days after receipt of notice to proceed, the Contractor Quality Control (CQC) Plan proposed. The Government will consider an interim plan for the first 30 days of operation. Construction will be permitted to begin only after acceptance of the CQC Plan or acceptance of an interim plan applicable to the particular feature of work to be started. Work outside of the accepted interim plan will not be permitted to begin until acceptance of a CQC Plan or another interim plan containing the additional work.

3.2.1 Content of the CQC Plan

Include, as a minimum, the following to cover all construction operations, both onsite and offsite, including work by subcontractors, and consultants:

- a. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff will implement the three phase control system for all aspects of the work specified. The CQC System Manager can be the project superintendent.
- b. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function.
- c. Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors and consultants.
- d. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test. (Laboratory facilities approved by the Contracting Officer must be used.)
- e. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.
- f. Reporting procedures, including proposed reporting formats.

3.2.2 Acceptance of Plan

Acceptance of the Contractor's plan is required prior to the start of demolition process. Acceptance is conditional and will be predicated on satisfactory performance during the demolition. The Government reserves the right to require the Contractor to make changes in his CQC Plan and operations including removal of personnel, as necessary, to obtain the quality specified

3.2.3 Notification of Changes

After acceptance of the CQC Plan, notify the Contracting Officer in writing of any proposed change. Proposed changes are subject to acceptance by the Contracting Officer.

3.3 COORDINATION MEETING

After the Preconstruction Conference, and prior to acceptance by the Government of the CQC Plan, meet with the Contracting Officer or Authorized Representative and discuss the Contractor's quality control system. During the meeting, a mutual understanding of the system details must be developed, including the forms for recording the CQC operations, control activities, testing, administration of the system for both onsite and offsite work. Minutes of the meeting will be prepared by the Contractor, signed by both the Contractor and the Contracting Officer and will become a part of the contract file. There may be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the CQC system or procedures which may require corrective action by the Contractor.

3.4 QUALITY CONTROL ORGANIZATION

3.4.1 Personnel Requirements

The requirements for the CQC organization are a CQC System Manager and sufficient number of additional qualified personnel to ensure safety and contract compliance. The Safety and Health Manager must receive direction and authority from the CQC System Manager and serve as a member of the CQC staff. Personnel identified in the technical provisions as requiring specialized skills to assure the required work is being performed properly will also be included as part of the CQC organization. The Contractor's CQC staff must maintain a presence at the site as necessary during progress of the work and have complete authority and responsibility to take any action necessary to ensure contract compliance. The CQC staff will be subject to acceptance by the Contracting Officer. Provide adequate office space, filing systems and other resources as necessary to maintain an effective and fully functional CQC organization. Promptly complete and furnish all letters, submittals, schedules and all other project documentation to the CQC organization. The CQC organization shall be responsible to maintain these documents and records at the site at all times, except as otherwise acceptable to the Contracting Officer.

3.4.2 CQC System Manager

Identify as CQC System Manager an individual within the onsite work organization who is responsible for overall management of CQC and have the authority to act in all CQC matters for the Contractor. The CQC System Manager must be a construction person with a minimum of 5 years in related work. This CQC System Manager must be on the site at all times during construction and be employed by the prime Contractor. The CQC System Manager must be assigned as System Manager but may have duties as project superintendent in addition to quality control. Identify in the plan an alternate to serve in the event of the CQC System Manager's absence.

3.4.3 CQC Personnel

In addition to CQC personnel specified elsewhere in the contract, provide as part of the CQC organization specialized personnel to assist the CQC System Manager for the following areas: civil and environmental. These individuals may be employees of the prime or subcontractor; be responsible to the CQC System Manager; have the necessary education and/or experience for the job. These individuals may perform other duties but must be allowed sufficient time to perform their assigned quality control duties as described in the Quality Control Plan. A single person may cover more than one area provided that they are qualified to perform QC activities in each designated and that workload allows.

3.4.4 Organizational Changes

Maintain the CQC staff at full strength at all times. When it is necessary to make changes to the CQC staff, revise the CQC Plan to reflect the changes and submit the changes to the Contracting Officer for acceptance.

3.5 SUBMITTALS AND DELIVERABLES

Submittals, if needed, must comply with the requirements in Section 01011 GENERAL CONDITIONS, Paragraph 23 Material, Equipment and/or Documentation Submittals. The CQC organization is responsible for certifying that all submittals and deliverables are in compliance with the contract requirements.

3.6 CONTROL

Contractor Quality Control is the means by which the Contractor ensures that the construction, to include that of subcontractors and service suppliers, complies with the requirements of the contract. At least three phases of control must be conducted by the CQC System Manager of the construction work as follows:

3.6.1 Preparatory Phase

This phase is performed prior to beginning work, after all required plans/documents are approved/accepted, and after copies are at the work site. This phase includes:

- a. A review of each paragraph of applicable specifications, reference codes, and standards. Make available during the preparatory inspection a copy of those sections of referenced codes and standards applicable to that portion of the work to be accomplished in the field. Maintain and make available in the field for use by Government personnel until final acceptance of the work.
- b. Review of the contract drawings.
- c. Check to assure that all materials and/or equipment have been tested, submitted, and approved.

- d. Review of provisions that have been made to provide required control inspection and testing.
- e. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the contract.
- f. Examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.
- g. Review of the appropriate activity hazard analysis to assure safety requirements are met.
- h. Check to ensure that the portion of the plan for the work to be performed has been accepted by the Contracting Officer.
- i. Discussion of the initial control phase.
- j. The Government must be notified at least 48 hours in advance of beginning the preparatory control phase. Include a meeting conducted by the CQC System Manager and attended by the superintendent, other CQC personnel (as applicable), and the foreman responsible. Document the results of the preparatory phase actions by separate minutes prepared by the CQC System Manager and attach to the daily CQC report. Instruct applicable workers as to the acceptable level of workmanship required in order to meet contract specifications.

3.6.2 Initial Phase

This phase is accomplished at the beginning work. Accomplish the following:

- a. Check work to ensure that it is in full compliance with contract requirements. Review minutes of the preparatory meeting.
- b. Verify adequacy of controls to ensure full contract compliance. Verify required control inspection and testing
- c. Resolve all differences.
- d. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.
- e. The Government must be notified at least 48 hours in advance of beginning the initial phase. Prepare separate minutes of this phase by the CQC System Manager and attach to the daily CQC report.
- f. The initial phase should be repeated for each new crew to work onsite, or any time acceptable specified quality standards are not being met.

3.6.3 Follow-up Phase

Perform daily checks to assure control activities, including control testing, are providing continued compliance with contract requirements, until completion of the particular feature of work. Record the checks in the CQC documentation. Conduct final follow-up checks and correct all deficiencies prior to the start of additional

features of work which may be affected by the deficient work. Do not build upon nor conceal non-conforming work.

3.7 TESTS

3.7.1 Testing Procedure

Perform specified or required tests to verify that control measures are adequate to provide a product which conforms to contract requirements. Upon request, furnish to the Government duplicate samples of test specimens for possible testing by the Government. Procure the services of an approved testing laboratory. Perform the following activities and record and provide the following data:

- a. Verify that testing procedures comply with contract requirements.
- b. Verify that facilities and testing equipment are available and comply with testing standards.
- c. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.
- d. Record results of all tests taken, both passing and failing on the CQC report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test. If approved by the Contracting Officer, actual test reports may be submitted later with a reference to the test number and date taken. Provide an information copy of tests performed by an offsite or commercial test facility directly to the Contracting Officer. Failure to submit timely test reports as stated may result in non-payment for related work performed and disapproval of the test facility for this contract.

3.7.2 Testing Laboratories

3.7.2.1 Capability Check

The Government reserves the right to check laboratory equipment in the proposed laboratory for compliance with the standards set forth in the contract specifications and to check the laboratory technician's testing procedures and techniques. Laboratories utilized for testing soils must meet regulatory requirements of "La Junta de Andalucía" for the specific analysis performed.

3.8 COMPLETION INSPECTION

3.8.1 Punch-Out Inspection

Conduct an inspection of the work by the CQC Manager near the end of the work, or any increment of the work established by "additional items" or by the specifications. Prepare and include in the CQC documentation a punch list of items

which do not conform to the approved drawings and specifications, as required by paragraph DOCUMENTATION. Include within the list of deficiencies the estimated date by which the deficiencies will be corrected. Make a second inspection the CQC System Manager or staff to ascertain that all deficiencies have been corrected. Once this is accomplished, notify the Government that the facility is ready for the Government Pre-Final inspection.

3.8.2 Pre-Final Inspection

The Government will perform the pre-final inspection to verify that the facility is complete and ready for future proposed use. A Government Pre-Final Punch List may be developed as a result of this inspection. Ensure that all items on this list have been corrected before notifying the Government, so that a Final inspection with the customer can be scheduled. Correct any items noted on the Pre-Final inspection in a timely manner. These inspections and any deficiency corrections required by this paragraph must be accomplished within the time slated for completion of the entire work or any particular increment of the work if the project is divided into increments by separate completion dates.

3.8.3 Final Acceptance Inspection

The Contractor's Quality Control Inspection personnel, plus the superintendent or other primary management person, and the Contracting Officer's Representative must be in attendance at the final acceptance inspection. Additional Government personnel including, but not limited to, those from Base/Post Civil Facility Engineer user groups, and major commands may also be in attendance. The final acceptance inspection will be formally scheduled by the Contracting Officer based upon results of the Pre-Final inspection. Notify the Contracting Officer at least 14 days prior to the final acceptance inspection and include the Contractor's assurance that all specific items previously identified to the Contractor as being unacceptable, along with all remaining work performed under the contract, will be complete and acceptable by the date scheduled for the final acceptance inspection. Failure of the Contractor to have all contract work acceptably complete for this inspection will be cause for the Contracting Officer to bill the Contractor for the Government's additional inspection cost in accordance with the contract clause titled "Inspection of Construction".

3.9 DOCUMENTATION

Maintain current records providing factual evidence that required quality control activities and/or tests have been performed. Include in these records the work of subcontractors and suppliers on an acceptable form that includes, as a minimum, the following information:

- a. Contractor/subcontractor and their area of responsibility.
- b. Operating plant/equipment with hours worked, idle, or down for repair.

- c. Work performed each day, giving location, description, and by whom. When Network Analysis (NAS) is used, identify each phase of work performed each day by NAS activity number.
- d. Test and/or control activities performed with results and references to specifications/drawings requirements. Identify the control phase (Preparatory, Initial, Follow-up). List of deficiencies noted, along with corrective action.
- e. Quantity of materials hauled away from the site with statement as to acceptability by authorised landfill, certification of disposal, and reference to specifications/drawings requirements.
- f. Quantity of materials internally transported and stockpiled inside the Base.
- g. Submittals and deliverables reviewed, with contract reference, by whom, and action taken.
- h. Offsite surveillance activities, including actions taken.
- i. Job safety evaluations stating what was checked, results, and instructions or corrective actions.
- j. Instructions given/received and conflicts in plans and/or specifications.
- k. Contractor's verification statement.

Indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. Cover both conforming and deficient features and include a statement that equipment and materials incorporated in the work and workmanship comply with the contract. Furnish the original and one copy of these records in report form to the Government weekly within 24 hours after the date covered by the report, except that reports need not be submitted for days on which no work is performed. As a minimum, prepare and submit one report for every 7 days of no work and on the last day of a no work period. All calendar days must be accounted for throughout the life of the contract. The first report following a day of no work will be for that day only. Reports must be signed and dated by the CQC System Manager. Include copies of test reports and copies of reports prepared by all subordinate quality control personnel within the CQC System Manager Report.

3.10 SAMPLE FORMS

Sample forms shall be prepared by the Contractor and presented for approval prior to the commencement of any test.

3.11 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected non-compliance with the foregoing requirements. Take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, will be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders will be

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made the subject of claim for extension of time or for excess costs or damages by the Contractor.

END OF SECTION

SECTION 02111

EXCAVATION AND HANDLING OF CONTAMINATED MATERIAL

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

CONSEJO DE LA UNION EUROPEA

DECISION DEL CONSEJO 2003/32/CE ((2003) December 19, Criteria and Procedures for Admission of Residues in Landfills in accordance with article 16 and annex II of Directiva 1999/31/CE

DIRECTIVA 1999/31/CE (1999) April 19, relative to Waste Dumping
DEL CONSEJO

LEY 10/1998 (1998) April 21, regarding Residues (BOE no. 96, April 22)

U. S. DEPARTMENT OF DEFENSE (DOD)

FGS-SPAIN (2002) Environmental Final Governing Standards, Spain

MINISTERIO DE LA PRESIDENCIA

REAL DECRETO 9/2005 (2005) January 14, in which the Listing of Potentially Contaminating Activities and Criteria and Standards for the Declaration of Contaminated Soils are established

REAL DECRETO 105/2008 (2008) February 1, for the Regulation of Production and Management of Construction and Demolition Residues

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REAL DECRETO 1627/1997	(1997) October 24, in which Minimum Safety Dispositions in Construction works are established
DECRETO 604/2006	(2006) May 29, Modifications to R.D. 1627/1997
REAL DECRETO 773/1997	(1997) May 30, in which Minimum Health and Safety Dispositions relative to the Use of Personal Protective Equipment by the Workers are established

MINISTERIO DE MEDIO AMBIENTE

ORDEN MAM/304/2002	(2002) February 8, in which the Evaluation and Disposal Operations of Residues and the European Residues Listing are published (BOE no. 43, February 19 2002; correction of errors BOE no. 61, March 12 2002)
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CONSEJERÍA DE MEDIO AMBIENTE DE LA JUNTA DE ANDALUCIA

INFORME DE ACUERDO JAN/1999	January 1999, The Criteria and Standards to determine soil as contaminated in Andalusia and methodology and techniques for sample taking and analysis for its investigation
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1.2 SUBMITTALS

The following shall be submitted in accordance with Section 01011 GENERAL CONDITIONS, paragraph 23 Material, Equipment and/or Documentation Submittal.

A. Preconstruction Submittals

1. Safety Plan. Already included in Specification Section 01011 GENERAL CONDITIONS.
2. Excavation and Handling Work Plan

This Work Plan shall be included as a complete chapter of the overall Demolition Plan, to be submitted as per Specification Section 02220 DEMOLITION, and is an integrated part of it.

Submit the Work Plan within 20 calendar days after notice to proceed. No work at the site, with the exception of site inspections, sample collection and surveys, shall be performed until the Work Plan is approved. The Contractor shall allow 15 calendar days in the schedule for the Government's review. No adjustment for time or money will be made if re-submittals of the Work Plan are required due to deficiencies in the plan. At a minimum, the Work Plan shall include:

- a. Schedule of activities. It will be integrated in the Work Planning with all other activities.
- b. Method of excavation and equipment to be used.
- c. Shoring or side-wall slopes proposed.
- d. Storage methods and locations for solid contaminated material, in case it is not possible to send off Base the same day it is available for disposal.
- e. Authorized Landfill locations off Base.
- f. Stockpiling locations at Base and haul routes.

3. Authorized Waste Manager

Documentation submitted shall clearly show that Waste Manager is authorized to handle and dispose of all materials and wastes included in this project. Authorization shall be granted by the Consejería de Medio Ambiente de la Junta de Andalucía.

4. Waste Transporter Qualifications

Similar documentation as required in previous paragraph 3, applicable for Wastes Transportation.

B. Closure Report:

Five copies of the Closure Report within 21 calendar days of work completion at the site.

C. Test Reports

Sampling and Laboratory Analysis Reports

D. Certificates of Non Contaminated Soils

1.3 REGULATORY REQUIREMENTS

1.3.1 Permits and Authorizations

The Contractor shall obtain required national, regional, and local authorizations for transportation and delivery of soils, materials and contaminated wastes in “Inert” “Non Hazardous” and “Hazardous” landfills as applicable. In all cases this activity shall be performed by an Authorized Waste Manager. (Authorization granted by the Consejería de Medio Ambiente de la Junta de Andalucía.) All permits and landfill fees shall be included in the Base Bid. No additional cost shall be paid by the Government.

1.3.2 Certifications

The Contractor shall include in the Excavation and Handling Plan a copy of the Certification that authorizes the Waste Manager to handle materials listed in ORDEN MAM/304/2002 with the numbers 17 05 04 (Non Hazardous soil and stones) and 20 01 37 (Wood containing Hazardous materials).

1.4 DESCRIPTION OF WORK

There are two areas in this demolition project where contaminated materials are present:

a) Contaminated soil at ground level at the front of the Butt Firing-in Building, with level content of lead and copper higher than Reference Level. The same treatment shall be given to the upper 30 cm layer of the interior filling of the Building. The work shall consist of excavation, and removal of certain quantities of contaminated soils. It shall be handled as specified herein. It is assumed that 574 m³ of contaminated soils will be encountered which will require site clearing and off-site disposal. The quantity of contaminated soil is defined in drawing schedule and will require offsite disposal to an authorized Non Hazardous Landfill; however, the Contractor shall provide a unit price, per cubic meter, for the offsite disposal of additional contaminated soil which might be found with heavy metal total contents above the Reference Level. For the purposes of bidding, assume 64 laboratory analyses of heavy metals (from 32 samples) to determine metal concentrations in soils, and 10 characterization analyses of lixivate. A unit price for additional laboratory analysis for:

1. determination of heavy metals (price of analysis for each metal) total content, and
2. unit price for lixivates (per sample) will be provided.

b) Contaminated wooden planks from wings cribbing and interior building lining due to preservatives of the wood. The wooden planks represent a total of 215 m³ which will be separated from:

1. The wings when demolished, and
2. Obtained from the interior lining of the building before concrete demolition takes place.

In both cases the wood will be loaded on authorized trucks and transported to Hazardous Waste Landfill.

1.5 METHOD OF MEASUREMENT

1.5.1 Contaminated Soil Removal

The initial amount of 574 m³ (approximately 1148 metric tons) indicated in the project is included in the base bid. For additional amounts of contaminated soil different to the soil obtained from the first 30 cm layer inside and in front of the Butt Firing-in Building, the measurement for payment shall be determined by certified weight tickets from the disposal facility. In all cases, the Contracting Officer shall be notified in advance of the need of additional excavations requirement to remove possible excess of contaminated soil. The laboratory sample collection after the initial 30 cm layer removal, which is included in Base Bid, shall be obtained in the presence of the Contracting Officer or Authorized Representative. Only if the contamination level with heavy metals of the soil at the bottom of the remaining land, is higher than Reference Level, a second layer should be excavated and paid for.

1.6 CHEMICAL TESTING. REFERENCE LEVELS

Required sampling and chemical analysis shall be conducted in accordance with FGS-SPAIN, Decisión del Congreso 2003/32/CE for Lixivates, Standard Criteria for Contaminated Soils, 1999 Consejería de Medio Ambiente la Junta de Andalucía and applicable national, regional, and local regulations.

Two types of analyses will need to be performed:

1. Concentration of heavy metals in soils, and
2. Characterization of lixivates to qualify for Non Hazardous Waste Landfill acceptance.

Regarding analysis type 1, the exterior ground floor area shows concentrations of lead and copper higher than Reference Level, which are the levels of these heavy metals concentration acceptable for agriculture.

The Reference Levels for metal concentration will be limited to 200 mg/kg of Lead and 100 mg/kg of Copper, checking that pH are over 7 in all cases. See Informe de la Consejería de Medio Ambiente de la Junta de Andalucía of January/1999, regarding The Criteria and

Standards to determine soil as contaminated in Andalusia and methodology and techniques for sample taking and analysis for its investigation.

The characterization of lixiviates shall be made to the soils required to be sent to Non Hazardous Landfills. The contamination limits to compare with, are the ones shown at the Regulation “Decisión del Consejo 2003/32/CE” for this type of waste.

1.7 SCHEDULING

The Contractor shall notify the Contracting Officer three calendar days prior to the start of excavation of any contaminated material. The Contractor shall be responsible for contacting regulatory agencies to apply for permits, authorization and documentation in accordance with the applicable legal requirements.

PART 2 PRODUCTS

2.1 BACKFILL

Backfill material shall be uncontaminated material obtained from other locations within the project topsoil from earth mound building cover.

PART 3 EXECUTION

3.1 GENERAL

All work shall be in conformance with the Excavation and Handling Work Plan.

3.2 EXISTING STRUCTURES AND UTILITIES

No excavation shall be performed until site utilities have been field located. The Contractor shall take the necessary precautions to ensure no damage occurs to existing structures and utilities. Damage to existing structures and utilities resulting from the Contractor's operations shall be repaired at no additional cost to the Government. Utilities encountered that were not previously shown or otherwise located shall not be disturbed without approval from the Contracting Officer. Special precautions shall be taken to prevent electrical hazards due to the proximity of 2 overhead electrical High Voltage lines. These are shown in drawings and are clearly visible at the field.

3.3 CLEARING

Clearing shall be performed to the limits shown on the drawings. Clearing shall not be done at the ground front area of the building where a 30 cm layer of contaminated soil shall be

excavated and removed as “Non Hazardous Waste”. The little amounts of grass to be found, are irrelevant, and shall be removed along with the topsoil and gravel and hauled off Base to an authorized landfill.

3.4 CONTAMINATED MATERIAL REMOVAL

3.4.1 Excavation

Areas of contamination shall be excavated to the extent required. Excavation shall be performed in a manner that will limit spills and the potential for contaminated material to be mixed with uncontaminated material.

Care shall be taken to avoid the mixing of contaminated and uncontaminated soils and materials.

In the event of the mixing taking place, or in case of any doubt, mixed soils shall be treated as contaminated and be sent to the Non Hazardous Landfill at no additional cost to the Government. Wood shall in all cases be sent to the Hazardous Wastes Landfill.

3.4.2 Shoring

If workers must enter the excavation, safety conditions shall be evaluated, and grounds shall be shored, sloped or braced as required by RD 1627/1997 and RD 773/1997. Specific preventative measures for this event shall be included in the Safety Plan.

3.5 SAMPLING AND LABORATORY ANALYSIS REPORTS.

The excavation in the identified area of contamination shall be completed, prior to the implementation of a new sample test program. The sample location grid shown in drawings shall be used as reference to take the samples. One sample per 80 square meters approximately is to be taken from the center of the square pattern. These samples shall be collected and evaluated by the Contractor following the numbered pattern shown in drawings. Soils exhibiting concentration greater than the applicable agricultural Reference Levels indicated in this specification will be excavated and the soils will be staged for disposal.

Excavation of soils outside the project footprint is not within the scope of this project. Locations of samples shall be temporarily marked in the field and documented on the as-built drawings.

Once the works are completely finalized, the Contractor shall obtain the last set of samples for the declaration of Non Contaminated Soil according to RD 9/2005 in which the Listing of Potentially Contaminating Activities and Criteria and Standards for the Declaration of Contaminated Soils are established. The Contractor, together with his Environmental Consultant and / or Specialized Laboratory, shall specify the type, number and location of

the samples to be taken in order to issue an Official Uncontaminated Soil Certificate in compliance with RD 9/2005. The cost of the entirety of these samples, as well as the Certificate shall be included in the Base Bid.

3.6 SPILLS

The overflow from container/ lorry is not acceptable, the excess shall be removed. It applies to all types of soils and materials due for transportation.

3.7 BACKFILLING

3.7.1 Confirmation Test Results

Excavations shall be backfilled following the Demolition Sequence shown in drawings after all contaminated materials have been removed and chemical test results have been approved. Backfill shall be placed and compacted to the lines and grades shown on the drawings.

3.8 DISPOSAL REQUIREMENTS

Offsite disposal of contaminated material shall be in accordance with FGS-Spain and national, regional, and local regulations as applicable. The Contractor shall be responsible to organize and manage the whole process.

3.9 CLOSURE REPORT

Five copies of a Closure Report shall be prepared and submitted within 21 calendar days of completing work at the site. The report shall be labeled with the contract number, project name, location, date, and the name of general contractor. The Closure Report shall include the following information as a minimum:

- a. A cover letter signed by a responsible company official certifying that all services involved have been performed in accordance with the terms and conditions of the contract documents and regulatory requirements.
- b. A narrative report including, but not limited to, the following:
 - (1) site conditions and cleanup criteria;
 - (2) quantity of soils and materials removed from each area;
 - (3) sampling locations and sampling methods;
 - (4) sample collection data such as date, time and name of organization or laboratory that physically took the samples; and
 - (5) sample chain-of-custody forms

- c. Copies of all laboratory test results.
- d. Copies of all certifications of final disposal signed by the responsible disposal facility official.
- e. Scale drawings showing limits of each excavation, limits of contamination if applicable, known underground utilities within 15 m of excavation, sample locations, and sample identification numbers. Stockpiling areas of saved materials within Base shall also be shown on the drawings. This applies to granular filling, topsoils and crushed concrete materials.
- f. Progress Photographs. The Contractor shall obtain written permission from the Contracting Officer, prior to photographing within the Base. Color photographs shall be used to document progress of the work. A minimum of four views of the site showing the location of the area of contamination, entrance/exit road, and any other notable site conditions shall be taken before work begins. After work has been started, activities at each work location shall be photographically recorded daily. Photographs shall be a minimum of 76.2 x 127.0 mm and shall include:
 - (1) Soil removal and sampling.
 - (2) Contaminated and uncontaminated material, handling, treatment, and transport.
 - (3) Stockpiling areas of saved materials.
 - (4) Post-construction photographs. After completion of work at the site, the Contractor shall take a minimum of four views.

A digital version of all photos shown in the report shall be included with the Closure Report. Photographs shall be a minimum of 76.2 x 127.0 mm and shall be mounted back-to-back in double face plastic sleeves punched to fit standard three ring binders. Each print shall have an information box attached. The box shall be typewritten and arranged as follows:

Project Name:	Direction of View:
Location:	Date/Time:
Photograph No.:	Description of View:

- g. The following package from the Waste Manager will be provided through the Contractor:
 - (1) Request for Admission of Wastes to Authorised Landfill
 - (2) Acceptance Document from Landfill Officials

- (3) Transport Notifications
- (4) Generator's Control and Follow-up Document (Spanish manifest which includes generator and transporter's details, destination, waste description and quantity, shipment and receipt dates, acceptance document number) (Documentos de Control y Seguimiento – DCS)
- (5) Copy of DCS document having filled out part B and signed by the Waste Manager
- (6) Copy of the letter to the Consejería de Medio Ambiente with evidence of the presentation of the DCS documents to them.
- (7) Copy of the annual waste manifest and copy of the submittal letter with indication of submittal date to the Consejería de Medio Ambiente.

END OF SECTION

SECTION 02220

DEMOLITION

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

CONSEJO DE LA UNION EUROPEA

DECISION DEL CONSEJO 2003/32/CE ((2003) December 19, Criteria and Procedures for Admission of Residues in Landfills in accordance with article 16 and annex II of Directiva 1999/31/CE

DIRECTIVA 1999/31/CE (1999) April 19, relative to Waste Dumping
DEL CONSEJO

LEY 10/1998 (1998) April 21, regarding Residues (BOE no. 96, April 22

U. S. DEPARTMENT OF DEFENSE (DOD)

FGS-SPAIN (2002) Environmental Final Governing Standards, Spain

MINISTERIO DE LA PRESIDENCIA

REAL DECRETO 9/2005 (2005) January 14, in which the Listing of Potentially Contaminating Activities and Criteria and Standards for the Declaration of Contaminated Soils are established

REAL DECRETO 105/2008 (2008) February 1, for the Regulation of Production and Management of Construction and Demolition Residues

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REAL DECRETO 1627/1997	(1997) October 24, in which Minimum Safety Dispositions in Construction works are established
DECRETO 604/2006	(2006) May 29, Modifications to R.D. 1627/1997.
REAL DECRETO 773/1997	(1997) May 30, in which Minimum Health and Safety Dispositions relative to the Use of Personal Protective Equipment by the Workers are established

MINISTERIO DE MEDIO AMBIENTE

ORDEN MAM/304/2002	(2002) February 8, in which the Evaluation and Disposal Operations of Residues and the European Residues Listing are published (BOE no. 43, February 19 2002; correction of errors BOE no. 61, March 12 2002)
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CONSEJERÍA DE MEDIO AMBIENTE DE LA JUNTA DE ANDALUCIA

INFORME DE ACUERDO JAN/1999	January 1999, The Criteria and Standards to determine soil as contaminated in Andalucía and methodology and techniques for sample taking and analysis for its investigation
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1.2 GENERAL REQUIREMENTS

The design of this demolition project follows the requirements established in Real Decreto 105/2008, of February 1, for the Regulation of Production and Management of Construction and Demolition Residues. The Contractor shall also fulfill all requirements to Demolition Contractors as applicable in that Regulation. Specific attention shall be given to the log recording material and wastes generated. Results of sample tests when applicable and quantities and destination of all materials and wastes shall be fully documented and certified by competent officials.

Do not begin demolition until authorization is received from the Contracting Officer. Remove rubbish and debris from the station daily; do not allow accumulations at the job site. The work includes demolition, transportation and stockpiling of identified materials inside the Base, removal and transportation off Base of contaminated soils and other material as required, and removal of resulting rubbish and debris. Rubbish and debris shall be removed from Government property daily, unless otherwise directed, to avoid accumulation at the demolition site. Materials that cannot be removed daily shall be stored in areas specified by the Contracting Officer. In the interest of occupational safety and

health, the work shall be performed in accordance with the Safety Plan and all applicable codes referenced. In the interest of conservation, salvage shall be pursued to the maximum extent possible. Demolition includes the crushing and recycling of existing concrete for base course aggregate under asphalt pavement or other purposes in future projects.

1.3 SUBMITTALS

The following shall be submitted in accordance with Section 01011 General Conditions, Par. 23, Material, Equipment and / or Documentation Submittals:

Demolition Plan

It will include the procedures proposed for the accomplishment of the work. The procedures shall provide for safe conduct of the work, including procedures and methods to provide necessary supports, lateral bracing and shoring when required, careful removal and disposition of materials specified to be removed and/or stockpiled, protection of property which is to remain undisturbed and coordination with other work in progress. The procedures shall include a detailed description of the methods and equipment to be used for each operation, in accordance with the Sequence of Operations shown in drawings and in Part 3 of this specification.

Proposed salvage, demolition and removal procedures shall also be part of the Demolition Plan which will have to be sent to the Contracting Officer for approval before work is started.

1.4 REGULATORY AND TRANSPORTATION REQUIREMENTS

Transportation of any material off Base shall fulfill the requirements of the Consejería de Medio Ambiente de la Junta de Andalucía.

Comply with national and regional transportation and disposal regulations. A Safety Plan shall be submitted following Standard Regulations indicated in paragraph 19, Specification Section 01011 General Conditions.

1.5 DUST AND DEBRIS CONTROL

Prevent the spread of dust and debris to occupied portions of the base and on the vicinity of airfield pavements, and avoid the creation of a nuisance or hazard in the surrounding area. Water spraying is particularly required while work is going on at the excavation of ground level building front and upper layer of granular filling inside the building. These two areas show lead and copper contamination and the dust control helps creating a safer environment when breathing while the material is removed. Do not use water in excess if it results in hazardous or objectionable conditions such as, but not limited to, flooding, or pollution. An excess of water in the soils to be deposited in Landfills may end up in the rejection of such material by Landfill Officials.

1.6 PROTECTION

1.6.1 Traffic Control Signs

Where pedestrian and driver safety is endangered in the area of removal work, use traffic barricades with flashing lights. Notify the Contracting Officer prior to beginning such work.

1.6.2 Existing Work

Before beginning any demolition work, the Contractor shall survey the site and examine the drawings and specifications to determine the extent of the work. The Contractor shall coordinate the work of this section with all other work and shall construct and maintain shoring, bracing, and supports as required. The Contractor shall ensure that structural elements are not overloaded and shall be responsible for increasing structural supports or adding new supports as may be required as a result of any cutting, removal, or demolition work performed under this contract.

1.6.3 Facilities

Protect electrical and mechanical services and utilities in the neighboring areas close to the job site. One specific electric tower shown in drawings shall be fenced around for protection and safety purposes. The Contractor shall ensure that no elements determined to be unstable are left unsupported and shall be responsible for placing and securing bracing, shoring, or lateral supports as may be required as a result of any cutting, removal, or demolition work performed under this contract while demolition is in progress.

1.6.4 Protection of Personnel

During the demolition work the Contractor shall continuously evaluate the condition of the structure being demolished and take immediate action to protect all personnel working in and around the demolition site. No area, section, or component of floors, roofs, walls, columns, pilasters, or other structural element will be allowed to be left standing without sufficient bracing, shoring, or lateral support to prevent collapse or failure while workmen remove debris or perform other work in the immediate area. The same preventions shall apply to the stability conditions of topsoil mound which covers the building and has to be removed in different stages during the demolition work.

As indicated in paragraph 1.5 "Dust and Debris Control", there are two areas where the soil shows some amount of lead and copper contamination. While work is going on, the Contractor shall consider the need to provide individual protection according

to applicable regulation listed in 19.2 of Specification Section 01011. Contamination levels are shown in Drawing C-100, General Notes. In case individual protections are required, it will have to be included in the Safety Plan.

1.7 BURNING

The use of burning at the project site for the disposal of refuse and debris or any other purposes shall not be permitted.

1.8 FOREIGN OBJECT DAMAGE (FOD)

Aircraft and aircraft engines are subject to FOD from debris and waste material lying on airfield pavements. Remove all such materials that may appear on the proximity of operational aircraft pavements due to the Contractor's operations.

1.9 REQUIRED DATA

Demolition Plan shall include procedures for careful removal and disposition of materials specified to be salvaged, coordination with other work in progress, and a detailed description of methods and equipment to be used for each operation of the sequence. State provisions for securing the safety of the workers throughout the performance of the work.

1.10 USE OF EXPLOSIVES

Use of explosives will not be permitted.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 DEMOLITION SEQUENCE

1. Perform soil sample program and laboratory analysis of the following:
 - 1.1. Topsoil earth mound cover of the building exterior
 - 1.2. Ground level topsoil upfront firing-in building
 - 1.3. Granular filling inside building

** See Note 1 at the end of this Demolition Sequence

2. Once soil sample results are obtained and parameters are within specifications, the Contractor will start the deconstruction process with the following guidelines:
 - 2.1 Contracting Officer authorization shall have to be granted prior to any demolition activity.
 - 2.2 Demolition of side wings and adjacent earth mound cover. The rest of the earth mound cover shall be left in stable condition.
 - 2.3 Separate wooden planks from the soil removed in 2.2 and haul off Base to authorized Hazardous Waste Landfill. Documentation for the transportation and disposal of this material must have been obtained in advance through an Authorized Waste Manager.
 - 2.4 The soil removed from the side wings, already without wooden planks will be composed of mixed up granular filling from inside the wings themselves and earth mound backing. It shall be loaded on trucks and taken to an authorized landfill for “INERT” disposal of construction debris.
 - 2.5 Remove topsoil ground building cover and stockpile where indicated inside the Base perimeter for future use. Leave in place enough topsoil for future filling of the void left by building foundations and soil layer to be removed from ground level building exterior.
 - 2.6 Remove 30 cm top layer from the whole surface of building interior granular filling. For dust control, water irrigation will be spread over granular fill while earthwork is in process. Removed soils will be loaded on trucks, transported and deposited in an authorized “Non-Hazardous” landfill.
 - 2.7 Perform soil sample program and laboratory test of the remaining granular filling from inside the building.
 - 2.8 Once soil sample test results are certified acceptable, remove the remaining granular filling from inside the building and stockpile where indicated within Base perimeter
 - 2.9 Excavate and remove 30 cm top layer of topsoil at ground level from exterior front area, where shown in drawing. Water irrigation will be spread over the area while earthwork is in process for dust control. Excavated material consisting of topsoil, gravel and small pieces of lead and brass (bullets and cartridges) shall be hauled off Base and deposited in an Authorized “Non-Hazardous Material” Landfill.

- 2.10 Perform soil sample program and test of the new exposed ground at front area of the building excavated in 2.9. Additional excavation and soil removal shall be required in specific areas where metal concentration levels are higher than those established in specification as reference levels for agricultural soils. If this situation is given, additional costs shall be authorized at accepted unit prices.

** See Note 2 at the end of this Demolition Sequence

- 2.11 Removal of wooden planks from the building front and wood lining from the interior of the building. Haul it off Base to an authorized "Hazardous Waste" Landfill.

- 2.12 Demolition of Butt Firing-in reinforced concrete building and target slot construction, including building foundations. The demolition process shall be accomplished following strictly authorized demolition plan and safety plan, with adequate equipment and safety conditions. Special precautions shall be taken due to the proximity of two overhead high voltage electrical lines which are clearly indicated in drawings.

For the concrete building demolition a mobile crusher plant will be transported and installed at the job site inside the Base. Reinforced concrete crushing shall be accomplished at the job site.

Crushed concrete shall be 7 cm diameter maximum. A secondary crushing or milling process might be required to obtain this maximum size. This material shall be stockpiled where indicated inside Base perimeter. After concrete demolition is completed and crusher plant removed, the site will be thoroughly clean and free of all construction debris. Soil and debris removed shall be hauled off Base to an inert construction debris landfill.

- 2.13 Fill in foundation void and excavated area with mound topsoil. Compact 30 cm topsoil layer up to 90% of Modified Proctor test. After this first compacted layer is placed, extend additional topsoil up to the levels indicated in drawings, ensuring that rain water can be drained through neighbor culverts. Finally plough the land leaving it ready for farming.

- 3 Perform a final soil sample program in order to obtain the "Non-Contaminated soil" Certification from Authorized Laboratory or Authorized Consultants.

** See Note 3 at the end of this Demolition Sequence

NOTE 1.- There will be three sets of sample programs scheduled to determine levels of contamination in soils and wastes. All three are part of the Base Bid and will be included in the Base Offer.

- The Laboratory analysis to be scheduled shall be of two types:
 - (a) Determination of total concentration of Lead and Copper in mg/kg of soil,
 - (b) Characterization of leachate to qualify for Landfill acceptance.

The criteria of acceptability for both types are described in Specification Section 2111 Excavation and Handling of Contaminated Material, Par. 1.6 Chemical Testing. Reference Levels. These are 200 mg/kg for lead, 100 mg/kg for copper and a list of maximum values for parameters obtained from sample characterization in order to qualify for acceptance in each type of landfill.

- The soil Sample Program referred to in Par. 1 of this Demolition Sequence shall consist of:

1.1 Collection for laboratory analysis of six samples of topsoil from the earth mound cover. They will be taken at a depth between 10 and 20 cm from the surface. Both lead and copper concentration levels shall be obtained in each sample (two heavy metals analyses per sample). If all twelve results are within Reference Levels for both heavy metals, the earth mound cover can be removed in due course.

1.2 & 1.3 Collection, for Laboratory analysis, of 10 samples: 6 from ground level topsoil upfront Firing-in Building and 4 samples from the interior granular filling of the building (between 10 and 20 cm deep). Check for characterization of samples to determine if the quality is to be accepted in Non Hazardous Landfill.

Certification reports of all three analyses will be presented to the Contracting Officer for approval before demolition process is granted.

NOTE 2.- Once the 30 cm of superficial soil excavation has been completed, both inside and outside the building, a second set of samples shall be obtained to be able to certify that the soils are not contaminated.

Six samples shall be collected from inside the granular filling of the building and another 20 samples from the exterior front side (between 5 and 10 cm deep).

All these samples shall be obtained in the presence of the Contracting Officer or Authorized Representative. All 26 samples shall be analyzed for total concentration of Lead and Copper. If all results obtained are below the Reference Levels, the soils can be considered acceptable and the Specialized Laboratory shall certify the land as Non Contaminated.

Up until here, all costs shall be included in Base Bid.

If any of the samples show higher concentrations than Reference Levels for Lead and Copper, a second set of samples shall be prepared and presented for approval, for the specific areas affected. In this case, and depending on the results of this second set of analysis, additional excavation may be required. The cost of additional laboratory tests, and excavation and disposal of material to Landfill shall be paid as an addition. Authorization and written approval from Contracting Officer shall be required for additional payments.

When the process is over and all soils show concentrations of metals lower than Reference Levels, authorized Officials from the Laboratory or Registered Agency shall provide certificates of “Non Contaminated” soils to the area of demolition.

NOTE 3.- After all construction activities are completed, the specialized Laboratory or Registered Agency shall proceed with a final test program to determine soil contamination. A final certification of “Non Contaminated” soils shall be produced. The certification shall state that all soils within the Butt Firing-in in affected area are declared Non Contaminated as per Real Decreto 9/2005 and the Criteria and Standards (January 1999) of la Junta de Andalucía to determine soil as contaminated.

Required set of samples and analysis for Uncontaminated Soil Determination shall be proposed and performed by Contractor and Consultants shall be proposed by Contractor. Costs of analyses and certificates shall be included in the Base Bid.

3.2 EXISTING FACILITIES TO BE REMOVED

3.2.1 Structures

Existing structures indicated shall be removed in their entirety including foundation walls and footings. All appurtenances, and related structures such as steel supports, wooden lining and wood cribbing, shall be removed under this demolition effort as indicated on the drawings. Storm water culverts in the proximity shall be maintained and extended as drawn including a new French Drain to facilitate water drainage.

3.2.2 Concrete Crushing

All cement concrete removed under this contract shall have all steel removed, and shall be crushed to a maximum size of 7 cm for reuse as aggregate base course. Any crushed concrete shall be stockpiled at the indicated area as determined by the Contracting Officer. The stockpiled material shall remain the property of the Government. Provide protection measures as required to keep the production and dispersion of fines to a minimum during crushing and stockpiling operations.

3.3 FILLING

Holes, open basements and other hazardous openings shall be filled in accordance with Section 02111 Excavation and Handling of Contaminated Material, following the Sequence of Operations established.

3.4 DISPOSITON OF MATERIAL

3.4.1 Transportation Guidance

Transportation of all materials, in particular those handling hazardous materials (treated wood), non hazardous wastes (contaminated soils) and construction debris, shall be in accordance with local regulations and the “Consejería de Medio Ambiente de la Junta de Andalucía”.

3.5 CLEANUP

Earth, debris and dirt shall be removed. All materials shall be removed and transported in a manner that prevents spillage on streets or adjacent areas. Local regulations regarding hauling and disposal shall apply.

3.5.1 Debris and Rubbish

Debris shall be removed and transported in a manner that prevents spillage on streets or adjacent areas and off Base public roads. Local regulations regarding hauling and disposal shall apply.

*** END OF SECTION***