

1 September 2005  
Revision 0.0

**JACKSONVILLE NAVAL AIR STATION**  
**FEDERAL FACILITIES AGREEMENT**  
**SITE MANAGEMENT PLAN**

**CALENDAR YEAR 2006**

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## 1. THE BASIS FOR A SITE MANAGEMENT PLAN

The requirement for this Site Management Plan (SMP) is identified in the Federal Facilities Agreement (FFA) signed by the US Environmental Protection Agency (USEPA), the State of Florida, and the US Navy for Naval Air Station (NAS) Jacksonville, Jacksonville, Florida (the Site). The FFA was entered into based on the requirement for an interagency agreement identified in the Superfund Amendments and Reauthorization Act (SARA), section 120(e)(1). The intent of the plan is to provide:

- (1) action deemed necessary to mitigate any immediate threat to human health or the environment;
- (2) a list of operable units subject to the tenets of the FFA;
- (3) a prioritization and rationale for the operable units at the Site;
- (4) activities and schedules for work planned for the current year, including the submittal schedule for primary and secondary documents; and
- (5) work projections for subsequent calendar years.

The FFA was signed on 16 October 1990, and has an effective date of 1 November 1990.

This SMP addresses the Installation Restoration Program events: that occurred in calendar year 2004 and earlier; that are scheduled to occur in calendar year 2005; and that are projected for calendar year 2006 and beyond through the completion of Record of Decision (ROD) activities. The dates, for the current calendar year that are identified as 'Due Dates,' are subject to 'Stipulated Penalties' as discussed in the FFA.

## 2. OVERALL SITE MANAGEMENT APPROACH

Three major investigation activities have been conducted at the Site under the Navy Installation Restoration (IR) Program (NIRP) or Superfund Program: Preliminary Assessment (PA) or Initial Assessment Study, Site Inspection (SI) or Verification Study, and Extended Site Inspection (ESI) or Confirmation Study. The PA (1983) identified and assessed 38 potential sources of contamination (PSC) on the Site that could pose a potential threat to human health or the environment as a result of contamination derived from past naval operations. The station, during its review of the draft PA, identified two additional PSCs thereby making a total of 40 post-PA PSCs. The SI (1985) and ESI (1986) were conducted to confirm or refute the presence of hazardous substances at the PSCs identified in the PA; and, if contamination was detected, evaluate its magnitude and extent to a degree that would allow for the recommendation of future remedial response actions. As a result of IR activities, fourteen additional sites were identified for a total of 55. In addition to the NIRP/Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) program, the station has other active regulatory programs. The Florida Department of Environmental Protection (FDEP) issued a Florida Resource Conservation and Recovery Act (RCRA) permit to NAS Jacksonville. Concurrently, an RCRA/Hazardous and Solid Waste Amendment (HSWA) permit was

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issued to the installation by USEPA in June 1987. A RCRA Facility Assessment (RFA) was included in the USEPA issued permit. An Underground Storage Tank Program is currently investigating 24 tanks as provided for in Florida Administrative Code Section 62-770.

Of the 54 identified IR PSCs, 4 are currently being addressed through the Remedial Investigation and Feasibility Study (RI/FS) process. Two RI/FS' were completed in 2004, one RI/FS was completed in 2003, and 1 will be completed in 2005. Twenty-one PSCs required FFA site screening efforts due to data quality objective inadequacies, or data gaps. Due to the proximity of 23 PSCs to the St. Johns River, the US Navy shall assess the state of the river immediately about the station as part of the investigations of the PSCs that border the river as deemed necessary due to potential releases that the Navy has made.

The SMP provides an IR Program event management plan. The Plan ONLY discusses the management of PSCs that are identified as needing to undergo Phase II: Remedial Investigation, Feasibility Study, and possibly Phase III: Remedial Design and Remedial Action, of the IR/CERCLA Program. Included is a description of the Site's PSC arrangement into Remedial Activity groupings or Operable Units (OU).

A list of projected schedule tasks through the signing of a Record of Decision is furnished. Detailed therein are program events to take place in the upcoming year and the delivery date for each draft primary document and a target date for secondary documents. The Navy shall update the SMP yearly.

### 3. RATIONALE FOR OPERABLE UNIT PSC GROUPINGS

In order to facilitate implementation of NAS Jacksonville's IR Program, the PSCs are organized into three groups: 8 RI/FS OUs; a PSC screening group; and a PSC petroleum group. The screening group and the petroleum group will not be further considered in this SMP.

The criteria used to generate the RI/FS OU arrays are:

- (1) geographic proximity of sites,
- (2) contaminant types,
- (3) aquifer contamination zones,
- (4) potential investigation methods,
- (5) potential scope and complexity of the investigation,
- (6) remedial activities impact on stations mission,
- (7) regulatory concerns, and
- (8) similarity of potential remedial actions.

The OUs with the associated PSCs:

**OU#1: Oil and Solvent Disposal Pits Area**

PSC 26, Old Main Registered Disposal Area  
PSC 27, Ex-PCB Transformer Storage Area

**OU#2: Wastewater Treatment Area**

PSC 2, Present Fire Fighting Training Area  
PSC 3, West WWTP Ex-Sludge Disposal Area  
PSC 4, Pine Tree Planting Area  
PSC 41, Domestic Sludge Drying Beds  
PSC 42, WWTP Polishing Pond  
PSC 43, IWTP Sludge Drying Beds

**OU#3: Industrial Area & Dry Cleaners**

PSC 11, Hangar Building 101  
PSC 12, Old Test Cell, Building 101K  
PSC 13, Radium Paint Waste Disposal Pit  
PSC 14, Battery Shop  
PSC 15, Solvent and Paint Sludge Disposal Area  
PSC 16, Storm Sewer Discharge at Black Point  
PSC 48, Base Dry Cleaners

**OU#4: PSC 21, Casa Linda Lake**

**OU#5: PSC 51, South Antenna Field Firefighting Training Area**

**OU#6: PSC 52, Hangar 1000**

**OU#7: PSC 46, Defense Reutilization & Marketing Office Yard (DRMO)**

**OU#8: PSC 47, Pesticide Shop & Disease Vector Ecology Control Center (DVECC)**

Operable Unit remedial activities are being phased based on program priorities, schedule effectiveness, task management, and funding capacity. Due to the large number of PSCs on the Site, the number of PSCs in each RI/FS OU, the aggregate complexity of the contamination problem at each OU, and funding limitations, the commencement of work at all OUs concurrently was not feasible; therefore, the Navy has implemented a phased approach. Based on hazard assessment, the Navy proceeded with RI/FS OU#1 first. The RI/FS is complete and the ROD was signed on 23 September 1997. The RI for OU#2 is complete and the ROD was signed on 20 October 1998. The RI/FS for OU#3 is partially completed and the ROD was signed 20 September 2000. Areas A and E were not included in the

ROD due to further investigation required by the regulators. The RI/FS addendum was completed on 10 August 2004. The PP and ROD are on hold until additional information needed to select a technology is completed. The RI/FS for OU#4 is complete and the ROD was signed 20 September 2000. The RI/FS' for OU#5, OU#6 and OU#7 are complete. In addition, the RI/FS for PSC 47, Pesticide Shop and Disease Vector Ecology Control Center is underway (see Section 8).

This staggered scheduling provided for a coherent effort by the investigative and engineering team enabling a higher quality assessment of the problem and more accurate identification of a suitable remedial action response. The aggregation of the PSCs and the assignment of phasing priorities were based on the eight criteria stated above. The specific aggregation issues are discussed in the accompanying OU Narratives. The assignment of priorities was driven by the actual or potential threat posed by the aggregate known or suspected contamination.

The Oil and Solvent Disposal Pits Area, OU#1, is situated on a topographical high and contains halogenated hydrocarbons and petroleum hydrocarbons. The area drains into a St. Johns River estuary and adjoining wetlands and abuts a military housing area. The potential environmental and human health threat was sufficient to commence IR program RI/FS work at this OU first.

The Wastewater Treatment Area, OU#2, has a known, large areal, heavy metal and potential halogenated hydrocarbon contamination problem. Due to the proximity of the OU to the St. Johns River, there was sufficient potential threat to make this OU a number two priority. Additionally, PSCs 41, 42, and 43 are impacted by a RCRA closure Permit.

The Industrial Area, OU#3, has known halogenated hydrocarbon contamination in approximately 8 relatively small groundwater plumes. Because the OU abuts the St. Johns River, there is concern about an environmental threat. This large, 134-acre industrial development required a multi-phase field effort to complete the investigation. Due to the anticipated time and mission sensitivity of this area, IR efforts at this OU were scheduled to commence third.

OU#4 through OU#8 were selected by the NAS Jacksonville Partnering to commence next due to the potential environmental and human health threat and available funding.

NAS Jacksonville's NIRP Plan (Plan) details the overall and specific management of addressing IR remedial activities. Due to the large number of PSCs, economies of scale dictate the singular establishment of plan methodologies and protocols. Volume 1, Organization and Planning, addresses the organization of the Plan, data and project management functions, specific IR Program sub-plans: Health and Safety Plan, and Community Relations Plan, Site and PSC background information, OU PSC aggregation process, and activity/OU priority formulation. Volume 2 contains the Remedial Response Decision System (RRDS). Volume 3 contains Site Screening documentation. Volume 4

contains the basic methodologies and protocols for conducting field investigations, conducting field-sampling efforts - Basic Field Sampling Plan (BFSP), and performing field and laboratory analytical activities - Quality Assurance Program Plan (QAPP). The BFSP and the QAPP are combined into one document called the Basic Sampling and Analysis Plan (BSAP). The specific OU RI/FS Work Plans are contained in Volume 5 - OU#1, 6 - OU#2, and 7 - OU#3. Volumes 5, 6, and 7 are in place. Once the basic set of IR/CERCLA work protocols and methodologies contained in the OU#1 specific work plan had concurrence, the development of additional work plans was commenced.

The Navy's Installation Restoration Program Plan for NAS Jacksonville is available for viewing in the information repository at the Jacksonville Public Library located at 122 North Ocean Street, Jacksonville, Florida 32202.

#### 4. SITE PSCs SMP EXCLUSIONS

The PSCs identified in Attachment A to the FFA as Site Screening PSCs are neither included nor otherwise addressed herein, except in this section. The Navy shall use the Remedial Response Decision System to determine future response activities at the Site Screening PSCs. See NIRP Plan Volume 2 for additional information. If RI/FS activities are recommended, the Navy will create additional OUs based on the criteria presented to address the contamination and risk issues identified by the RRDS implementation. Additional OUs shall be incorporated into the SMP.

The Petroleum PSC Group, consisting of five PSCs: 1, 2, 7, 19, and 33, have been transferred to the Underground Storage Tank Program as provided for in the FFA for response activities detailed in Florida Administrative Code 62-770 and are not included in the SMP or the Navy's IR Program.

#### 5. OPERATIONAL UNIT/PSC SCHEDULING

Implementation of an OU's work plan is based on program, resource and funding priorities. The Navy did not have sufficient funds to fully implement the large RI/FS work efforts for all operable units during a single federal fiscal cycle. Since the Navy could not commit to implementing these work efforts all at once, they are implemented as funds are made available.

#### 6. HSWA Part VII-Modification of the Corrective Action Schedule of Compliance

For the tasks included in this Site Management Plan (SMP) schedule provided herein, the schedule in the SMP takes precedent over the Schedule of Compliance provided in Appendix D of the HSWA Corrective Action Permit for NAS Jacksonville. If the Department determines that a requested modification of the Corrective Action Schedule of Compliance is appropriate, the SMP schedule shall be modified to reflect the approved changes. Once the Department has approved the modification, the

updated SMP schedule shall take precedence over the previous SMP Schedule and the Schedule of Compliance provided in Appendix D. The approved SMP is to be included as part of the HSWA CA Permit for NAS Jacksonville.

## 7. 2006 - 2007 GENERAL SCHEDULE

The following is a list of the general deliverables that are associated with the overall management of the site and their transmittal target and due dates. Although the quarterly reports are listed as general deliverables, their intent is accomplished by the NAS Jacksonville Partnering team meeting minutes.

### **2006 GENERAL DELIVERABLES**

1st Qtr. Quarterly Progress Report  
2nd Qtr. Quarterly Progress Report  
3rd Qtr. Quarterly Progress Report  
4th Qtr. Quarterly Progress Report

### **TARGET DATES**

28 April 2006  
31 July 2006  
31 October 2006  
31 January 2007

### **PRIMARY DELIVERABLES**

2007 Site Management Plan

### **DUE DATES**

1 September 2006

### **2007 GENERAL DELIVERABLES**

1st Qtr. Quarterly Progress Report  
2nd Qtr. Quarterly Progress Report  
3rd Qtr. Quarterly Progress Report  
4th Qtr. Quarterly Progress Report

### **TARGET DATES**

28 April 2007  
31 July 2007  
31 October 2007  
31 January 2008

### **PRIMARY DELIVERABLES**

2008 Site Management Plan

### **DUE DATES**

1 September 2007

## 8. OPERATIONAL UNIT NARRATIVES

The following are narratives describing the contents of each OU. A description of the physical location and terrain is furnished. What is known about the contamination and an assessment of its present threat is included. The events for the upcoming year are listed and the due dates of primary documents and the target dates of secondary documents are provided. A schedule of the projected submittal dates for primary documents only is included for the first outlying year. For the long-term view, a list of projected schedule program tasks through the finalization of the Record of Decision is included.

A. Operable Unit #1: The Oil and Solvent Disposal Area

Description:

OU 1 consists of an area of approximately 40 acres located in the south central part of the Site. The topography is open and relatively flat. The unit is located within a drainage ditch network. In an included area approximately 150 feet square, PCB transformers were stored. This unit is comprised of PSC 26 - The Old Main Registered Disposal Area and PSC 27 - Ex-PCB Transformer Storage Area.

Previous studies have identified groundwater and subsurface soils contaminated with industrial solvents, heavy metals, PCBs and petroleum hydrocarbons. The unit has experienced interim remedial measures that have removed the direct exposure threat to the public's health or the environment.

Work to Date:

The basic work plan for the site has been developed. The RI/FS Work Plan for this OU has been developed, accepted, and implemented. The required supplemental fieldwork has been completed. The initial fieldwork validated the location of a large concentration (+/- 3%) of petroleum hydrocarbons contaminated with PCBs. A focused effort was implemented for source mitigation. The Focused RI/FS report was finalized in December 1993. The RI/FS was finalized in March 1996. The Remedial Design was finalized in June 1997. The ROD was signed on 23 September 1997. The remedial action (RA) commenced September 1997. Long Term Monitoring commenced February 1999. Based on the results of the ongoing groundwater monitoring, supplemental groundwater assessments shall be accomplished.

**2006 Primary Deliverables**

-- NONE --

**Projected Target Dates**

-- NONE --

B. Operable Unit # 2: The Wastewater Treatment Area

Description:

An area on the northwest end of the air station comprising six PSCs: 2 - Former Fire Fighting Training Area, 3 - Former Sludge Disposal Area, 4 - Pine Tree Planting Area, 41 - Former Domestic Sludge Drying Beds, 42 - Former Polishing Pond, and 43 - Former Industrial Sludge Drying Beds. The area is the location of the station's domestic and industrial wastewater plants. It is bounded on the north by the St. Johns River, and, despite its relatively flat topography, is a hydrologic high. Groundwater underlying the area has known contamination, consisting of industrial solvents and heavy metals. No direct

exposure threat is presently known to exist to public health or the environment.

Groundwater at this unit is sampled as part of the HSWA Corrective Action portion of RCRA. It has been decided that the Federal Facilities Group in Tallahassee will manage the unit as part of the ongoing CERCLA IR Program for NAS Jacksonville. Sampling results shall be submitted to the DOD Group.

Work to Date:

The RI/FS Work Plan was finalized January 1993. Due to funding constraints, the Work Plan was not implemented in its entirety. A focused effort was implemented for source mitigation for the areas identified as PSC 2, 41, and 43. Similar focused efforts for PSC 3 and 42 commenced in January 1994. PSC 2 was transferred to the Petroleum program. The RI/FS work plan has been implemented and the RI went final in January 1998. No FS was required due to the findings of the RI. The ROD was signed on 20 October 1998.

**2006 Primary Deliverables**

-- NONE --

**Projected Target Dates**

-- NONE --

C. Operable Unit #3: The Industrial Area and Dry Cleaner

Description:

Operable Unit #3 is an area on the east side of the Air Station comprising seven PSCs: 11 - Hangar 101, 12 - Old Test Cell Building 101K, 13 - Former Radium Paint Waste Disposal Pit, 14 - Battery Shop, 15 - Former Solvent and Paint Sludge Disposal Area, 16 - Black Point Storm Sewer Discharge, and 48 - Base Dry Cleaners. PSC 16 was added to OU #3 at the time of the RI/FS. The area is flat and adjacent to the St. Johns River. Located within this industrial complex is the Naval Aviation Depot (NADEP) and several helicopter squadrons. Previous studies have identified groundwater and subsurface soils contaminated with industrial solvents and heavy metals. Modeling by the US Geological Survey (USGS) indicates that groundwater may be seeping into a portion of the storm sewer system at NADEP.

Work to Date:

Specific scoping fieldwork requirements were identified at a meeting held in April 1993 at NADEP on NAS Jacksonville. Scoping fieldwork preparatory to the development of a site work plan was

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performed between July and September 1993. The RI/FS Work Plan was approved and implemented in a phased approach. Phase 1 investigated eight hot spots to determine if they pose an immediate risk to human health and the environment. Phase 1 was to be investigated by the use of EE/CAs. The EE/CA was modified to only the engineering evaluation. Phase 2 was preparation of an RI/FS. The RI/FS was finalized in April 2000. The ROD was signed on 20 September 2000. Seven areas of elevated groundwater contamination were evaluated during the RI/FS and Engineering Evaluation.

- Areas A and E required additional investigation, which culminated in the RI/FS addendum issued on 10 August 2004.
- Areas B and G began Monitored Natural Attenuation in FY2002.
- Areas C and D began remedial action in FY2002/2003. Additional treatment may be required after initial post-treatment sampling.
- Area F has had an initial screening for Remedial Action and the levels that were detected were below those anticipated. Re-evaluation of the plume has been accomplished and the results have been evaluated by the team. Remedial Action will be initiated in FY 2005.

**2006 Primary Deliverables**

-- NONE --

**2006 Secondary Deliverables**

--NONE--

**Projected Target Dates**

-- NONE --

**Projected Target Dates**

--NONE--

D. Operable Unit #4 (PSC 21) – Casa Linda Lake

Description:

Casa Linda Lake is approximately 11 acres and is situated at the north end of the Casa Linda Oaks Golf Course. Casa Linda Lake was identified as a PSC because of a fish kill that occurred in May 1979. The fish kill was caused by an application of a pesticide to the surrounding area.

Work to Date:

The RI/FS work plan has been developed, accepted, and implemented. The RI is final; a Focused Feasibility Study was finalized in November 1999. The Proposed Plan was finalized in March 2000. The ROD was signed 20 September 2000. A Final Close Out Report was completed in July 2003.

**2006 Primary Deliverables**

-- NONE --

**Projected Target Dates**

-- NONE --



E. Operable Unit #5 (PSC 51) – The Fire Fighting Training Area at the South Antenna Farm

Description:

The Fire Fighting Training Area (FFTA) at the South Antenna Farm is located at the southern end of the base. The FFTA was identified as a PSC after sampling for risk indicated elevated levels of contaminants. The sampling was conducted due to a round bare spot that did not relate to any previously reported activities at this area. It is believed this is the FFTA that was originally reported as PSC 28 and was never found at that location.

Work to Date:

A Site Screening field effort was accomplished and the results indicated soil and groundwater contamination. An Interim Remedial Action was conducted to remove the source of the contamination in 1998. An RI/FS Work Plan was finalized in fiscal year 2000. The RI/FS and proposed plan were finalized in fiscal year 2002. The draft-final ROD was also issued in fiscal year 2002. The final ROD is expected to be signed by the Navy in fiscal year 2005.

**2006 Primary Deliverables**

-- NONE --

**Projected Target Dates**

-- NONE --

F. Operable Unit #6 (PSC 52) - Hangar 1000

Description:

Hangar 1000 is part of a complex that services large aircraft. This site is located in the keyway of Hangar 1000. Two tanks, A and B, which were constructed in the late 1960's or early 1970's, were used as a solvent-water separator. These tanks and their associated piping were located under the keyway and were covered by a cement sidewalk. South of the hangar is a parking area with a narrow grassy median between the parking area and the nearest road, Yorktown Avenue.

Groundwater at this unit is sampled as part of the HSWA Corrective Action portion of RCRA. In addition, the monitoring of wells will become part of the CERCLA selected remedial alternative for Hangar 1000 and will be reported as part of the Post-ROD Remedial Action.

Work To Date:

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A consent order was signed in 1988. Since that time 5 shallow soil borings were completed, 8 temporary piezometers were installed, 26 groundwater monitoring wells were installed, soil and groundwater samples were collected by DPT from 57 locations, and more than 20 soil samples were collected from excavations. The entire tank, wash rack, drain, and piping system has been removed or decontaminated, grouted, and abandoned in place. An application for a modification to the base's post-closure permit has been approved by FDEP. This site is being worked in the CERCLA program. The Final Health and Safety Plan, Sampling and Analysis Plan, Quality Assurance Project Plan, and the RI/FS Work Plan have been finalized. An RI/FS was completed on 19 March 2004. The ROD is expected to be completed by March 2006.

**2006 Primary Deliverables**

**Projected Target Dates**

Final ROD

March 15, 2006

**2006 Secondary Deliverables**

**Projected Target Dates**

--NONE--

--NONE--

G. Operable Unit #7 (PSC 46) – Defense Reutilization and Marketing Office Yard

**Description:**

The Defense Reutilization and Marketing Office Yard (DRMO) is located across U. S. Highway 17 from the southwest corner of NAS Jacksonville. DRMO was utilized for the disassembly and smelting of aircraft components into aluminum ingots from approximately 1943 through 1949. During the 1950's the site was developed for its current use, which is the reutilization and sale of surplus government equipment. Historical use for aircraft disassembly and the subsequent uses for maintenance and storage of this equipment have resulted in impacts to media at the site.

**Work to Date:**

DRMO has been assessed as part of the Navy Installation Restoration Program (NIRP). A Sampling Event Report identified impacts to soils, sediments, surface water, and groundwater at DRMO from a variety of operations conducted at the site. An industrial radiation survey was conducted by the U. S. Army Center for Health Promotion and Prevention Medicine. Elevated Radiation exposure readings

were encountered in various areas at DRMO. The Draft and Final Health and Safety Plan, Sampling and Analysis Plan, Quality Assurance Project Plan, and the RI/FS Work Plan were finalized in fiscal year 2000. The RI/FS was completed on 08 June 2003. The Draft-Final ROD is expected to be issued in 2005.

**2006 Primary Deliverables**

--NONE--

**2006 Secondary Deliverables**

--NONE--

**Projected Target Dates**

--NONE--

**Projected Target Dates**

--NONE--

H. Operable Unit #8 (PSC 47) – Pesticide Shop and Disease Vector Ecology and Control Center

Description:

The Pesticide Shop is located at Building 536 at NAS Jacksonville. It is located south of Birmingham Avenue and west of Child Street. The building is surrounded by pavement and is enclosed by a 6-foot high fence. It has occupied this site from the middle to late 1960s. The Disease Vector Ecology and Control Center (DVECC) also occupied the property in the 1960s and 1970s. DVECC is now located in building 937, which is immediately south of the pesticide shop. Past practices included disposal of pesticides in the soil.

Work to Date:

Soil and groundwater sampling was performed in the PSC 47 area during 1997. In early 1999, BEI performed an interim remedial action at PSC 47, which, according to the RRDS appendix for this site, resulted in the removal of approximately 1,570 tons of surface soil. The Final Health and Safety Plan, Sampling and Analysis Plan, Quality Assurance Project Plan, and the RI/FS Work Plan were finalized in 2001. The RI/FS is currently ongoing. Currently the Navy is evaluating various technologies for pesticide groundwater remediation. Field scale testing, if required, will delay the RI/FS and decision documents. The need for this will be determined after the bench scale testing is complete.

**2006 Primary Deliverables**

Final RI/FS

Draft Final Proposed Plan

**2006 Secondary Deliverables**

**Projected Target Dates**

15 Sep 2006

30 Oct 2006

**Projected Target Dates**

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--NONE--

--NONE--