

**NOISE CONTROL PLAN  
For DREDGING in the  
BAYPORT SHIP &  
TURNING CHANNEL**

## INTRODUCTION

The Corp of Engineers established Noise Performance Standards applicable to this project. The purpose of this Noise Control Plan is to present the contractor's program of self-monitoring and self-regulation which is designed to assure compliance with the established standards. This Noise Control Plan is submitted to comply with the contract to dredge areas in the Bayport Ship Channel. It describes the control actions, work area noise monitoring and potential mitigation actions to be performed to meet the specification requirements. Demonstration of compliance for noise will be conducted by HASCATS Inc. of Canton, Mississippi and is detailed in this Plan.

The Noise Control Plan will be updated and changed if work conditions or work hours change substantively.

## STANDARDS

The Performance Standards for Noise applicable to dredging operation are summarized in the flowing table.

**Noise Standard Summary**

<b>Receptor Location</b>	<b>Performance Standard/ Control Level</b>	<b>Performance Standard/ Control Level Values (exterior)</b>
Residential	Control Level (established as the threshold at which mitigation is recommended)	Daytime: 75 dBA (estimated hourly average) Nighttime: (08:00 pm to 7:00 am) 65 dBA (maximum hourly average) Daytime: 80 dBA (maximum hourly average)

Several observations can be made regarding these standards:

- 1 The standards are based one-hour equivalent noise levels
- 2 The noise standard is less stringent in commercial/industrial areas than in residential areas.
- 3 The nighttime standard is more stringent than the daytime standard in residential areas.
- 4 The nighttime standard is applicable between 08:00 pm and 7:00 am.
- 5 Demonstration of Compliance will be monitored by HASCATS Inc. others, i.e. not the dredging contractor.
- 6 The location of monitoring by others for compliance with the standard in the receptor location (neighboring properties), i.e. not the facility boundary.

## **PROPOSED ACTIVITIES**

Noise may emanate from several sources during dredging including material and equipment delivery vehicles, construction equipment, generators, pumps, rigging equipment, power tools, etc.

## **CONTROL MEASURES**

Control Measures will be implemented to keep equipment operating at their respective standard operating levels. Control measures to be implemented by Mike Hooks Inc will include, but not limited to:

- All equipment will have a maintenance check prior to delivery to the site.
- If the equipment is not running within the normal OSHA Noise exposure guidelines , maintenance will be performed, such as brake adjustment, or muffler replacement, prior to delivery to job site.
- Equipment will be inspected daily.
- Routine maintenance will be performed to keep equipment running properly.
- Excessive engine throttling will be avoided.
- Where practicable, equipment will be positioned to maximize natural or artificial features to attenuate noise and limit time of operation of construction activities to routine work hours.
- Doors to motor rooms will remained closed unless they must be opened to enter the room for maintenance or other required times.
- Mufflers and or extension of exhaust pipes will be installed as needed.
- The banging of metal by equipment used to move sediment will be used as needed and care shall be taken to prevent metal on metal hitting.

## **APPLICATION OF STANDARDS**

The dredging is being constructed in an industrial area but close to residential areas, therefore the Industrial Standard applies in the majority of cases. This is true for the industrial facilities along the harbor south of Shoreacres and southwest of El Jardin for the undeveloped industrial land north of the site. The 85/90 dBA commercial/industrial standard 29 CFR 1910.95 would apply to these receptor locations for employees.

The land south of the site has some rural residential development; therefore the 65dBA control level standard would apply between 8:00PM and 07:00AM. The site is bounded on the immediate north by Shoreacres other industrial facilities and by another residential area El Jardin. This area is sparsely settled with rural residential dwelling units; therefore the 65dBA standard applies between 08:00 PM and 7:00 AM. The control levels and standards apply to the receptor locations. The operant theory is that sound pressure levels attenuate over distance. If the noise standard is achieved at the boundary, the noise level will be even further below the standard at the more distant receptor locations.

The noise performance standards applicable to the dredging (i.e. short-term) are based on equivalent sound levels. An integrating or data logging type noise level meter is necessary for measurement of time averaged sound pressure levels.

## **NOISE MONITORING**

During dredging HASCATS Inc. will monitor the required to verify compliance with the contract. Area Noise Monitoring will be conducted:

- Commencing processing equipment installation and remaining site work;
- When equipment installation and remaining site work which have not previously been monitored begin;
- When equipment installation begins at new locations on the
- When significant modifications are made to the types of equipment being utilized at the site; and
- During these activities to confirm continued compliance with the specifications.

Area Noise Monitoring will be performed for source evaluation purposes only. It will serve as a guide with respect to compliance with contractor specifications and the potential for noise levels to exceed the applicable at nearby receptors. Should the area monitoring suggest a potential to exceed required noise levels, Mike Hooks Inc will be notified immediately. Mike Hooks Inc. may also elect to proactively implement engineering controls, as appropriate.

Specific methods, reporting requirements, personnel qualifications and equipment are described in the attached Work Area Noise Monitoring Plan. The Work Area Noise Monitoring Plan will be adjusted should work conditions or schedule change. Mike Hooks Inc. will endeavor to coordinate noise monitoring with the other contracts and contractors if required.

## **NOISE MITIGATION**

It is expected that average noise levels will not exceed the applicable control levels and standards since use of equipment during dredging is anticipated to be very limited. Should HASCATS Inc advise Mike Hooks Inc. that the dredging activities are resulting in an exceedance of the noise levels , based on the compliance monitoring, the specific source of the exceedance will be identified and engineering controls will be implemented if applicable.

These controls may include, but are not limited to:

- Shrouds, barriers or changing of equipment when practical.
- Corrective measures will be done as quickly as possible, but no longer than 8-hours after the initial exceedance event.
- Mike Hooks, Inc. has installed additional mufflers on all attendant plant in an effort to minimize excessive noise.

If the short-term (construction) noise standard is exceeded, then more assertive mitigation measures such as the removal and replacement of offending equipment, additional sound insulation or sound baffling in engine compartments, additional engine exhaust mufflers or resonators, etc. Mitigation measures for dredging activities will be implemented within 8-hours if a noise performance standard is exceeded. Should these corrective measures fail to mitigate the exceedance, an acoustical engineer will be brought in to analyze the situation and recommend practical solutions.

Mike Hooks, Inc. intends to perform dredging operations in the following geographical order and directional orientation in order to minimize any excessive noise pollution to the local communities.

1. The Dredge “Mike Hooks” will commence dredging operations in the “Flare” and intends to utilize the Morgan’s Point area as a landing area. Thus creating virtually zero percent noise intrusion to the local community. Mike Hooks, Inc. will stage some piping in the Bayport Channel across from the container dock but agrees that retrieval of said piping will only occur during daylight hours. This order of work is expected to require three to four weeks to complete.
2. Upon completion of the “Flare” the dredge “Mike Hooks” intends to dredge inbound in a Westerly direction dredging from the “Flare” to approximate STA.135+00 thus minimizing noise intrusion to the local community by stopping inbound operations approximately two thousand five hundred feet outside of the shoreline. This order will minimize noise to the local community by keeping the exhaust mufflers of the dredge pointed away from the communities while allowing the attendant plants to perform piping operations along the channel to the “Turning Basin” during daylight hours only.
3. Upon completion of the second order of work, Mike Hooks, Inc. proposes to relocate the dredge “Mike Hooks” to the “Turning Basin” and perform dredging operations in the Western two thirds of the “Turning Basin” in multiple directions. The remaining Eastern one third of the “Turning Basin” shall be dredged in a manner so that the exhaust of the dredge is pointed away from the surrounding communities and towards the industrial areas. While conducting operations in this area Mike Hooks, Inc. will limit all crew boat activity to daylight hours only unless in the case of an emergency.
4. The final order of work shall consist of dredging the Bayport Ship Channel that is located parallel to the shoreline in an outbound Easterly direction. Should it become evident that this final order of work is resulting in excessive noise to the surrounding communities during the nighttime hours, Mike Hooks, Inc. will either relocate the dredge to approximate STA. 135+00 prior to 8:00 PM in order to dredge inbound or in the worst case simply not perform dredging operations between the hours of 8:00 PM and 7:00 AM.

## **WORK AREA NOISE MONITORING PLAN**

### **Methods**

The contractor will monitor sound levels whenever dredging activity is occurring from 8 PM till 7 AM and will institute corrective measures if the self-monitoring suggests that the noise compliance standards may be exceeded.

The proposed noise control self-monitoring program will consist of one-hour checks at specified locations and long term noise monitoring each working day of dredging. The sound level meter will be placed approximately 5 ft off the ground with the microphone pointed towards the noise source at an angle of 10°, and a measurement will be recorded in A-weighted decibels (dBA). Monitoring will be conducted in the slow response mode for continuous equivalent sound level over an eleven hour period at receptor locations while the activity is at peak load.

Monitoring duration may be shortened for sources having steady noise emission levels. An integrating-type sound level meter will be erected on a tripod or attached to a building or structure. The average sound level will be manually recorded on a daily log sheet

The self-monitoring program will be reviewed periodically at the job-site progress meetings and adjustments made as required.

### **Reporting**

Mike Hooks, Inc. will be immediately notified if Work Area Monitoring suggests potential for a noise exceedance at a compliance point. The USACE will be notified immediately if a noise complaint is received.

### **Personnel Qualifications**

Field sampling personnel will have current site-specific training, as needed. In addition, personnel performing sound monitoring equipment installation and monitoring will be trained in the use of the sound level meter and other appropriate equipment.

### **Equipment List**

The following materials, as required, will be available while performing sound monitoring:

- Sound level meter(s) with appropriate batteries, cable and all-weather microphone equipment;
- Sound level meter manual;
- Sound level meter calibration notebook;
- Field notebook