NEW ORLEANS DISTRICT
CORPS OF ENGINEERS

LAKE BORGNE LEVEE DISTRICT
PUMPING STATIONS 1 THROUGH 8
KATRINA DAMAGE REPAIR

VOLUME 1 of 2

INSPECTION REPORTS

Prepared by:

WALDEMAR S. NELSON AND COMPANY
Incorporated
Engineers and Architects

1200 St. Charles Avenue
New Orleans, Louisiana 70130

Telephone: 504-523-5281
Fax: 504-523-4587

November 17, 2005 **NELSON JOB NO. 20050252**

FORWARD

This report presents the results of field inspections of St. Bernard Basin Drainage District Pumping Stations 1 through 8 conducted under Task Order Number 0012 of Contract No. W912P8-04-D-0005. The field inspections were to document damage to the stations as a result of the passage of Hurricane Katrina and provide a basis for cost estimates for repair. The report is divided into two volumes; Volume 1 presents the inspection reports of damage and cost estimates for repairs, while Volume 2 contains photographs of damage referenced in Volume 1.

For all pump stations except Station 2, recommended repairs consist of repair or replacement in kind. The extent of damage to the metal building housing Pump Station 2 was so extensive it is recommended not to repair or replace the building, but rather demolish the building, replace all damaged equipment with weather-proofed equipment, and provide a separate small control room for remote monitoring and control of pump station operations. For security, the entire area is to be enclosed within a 10 foot fence.

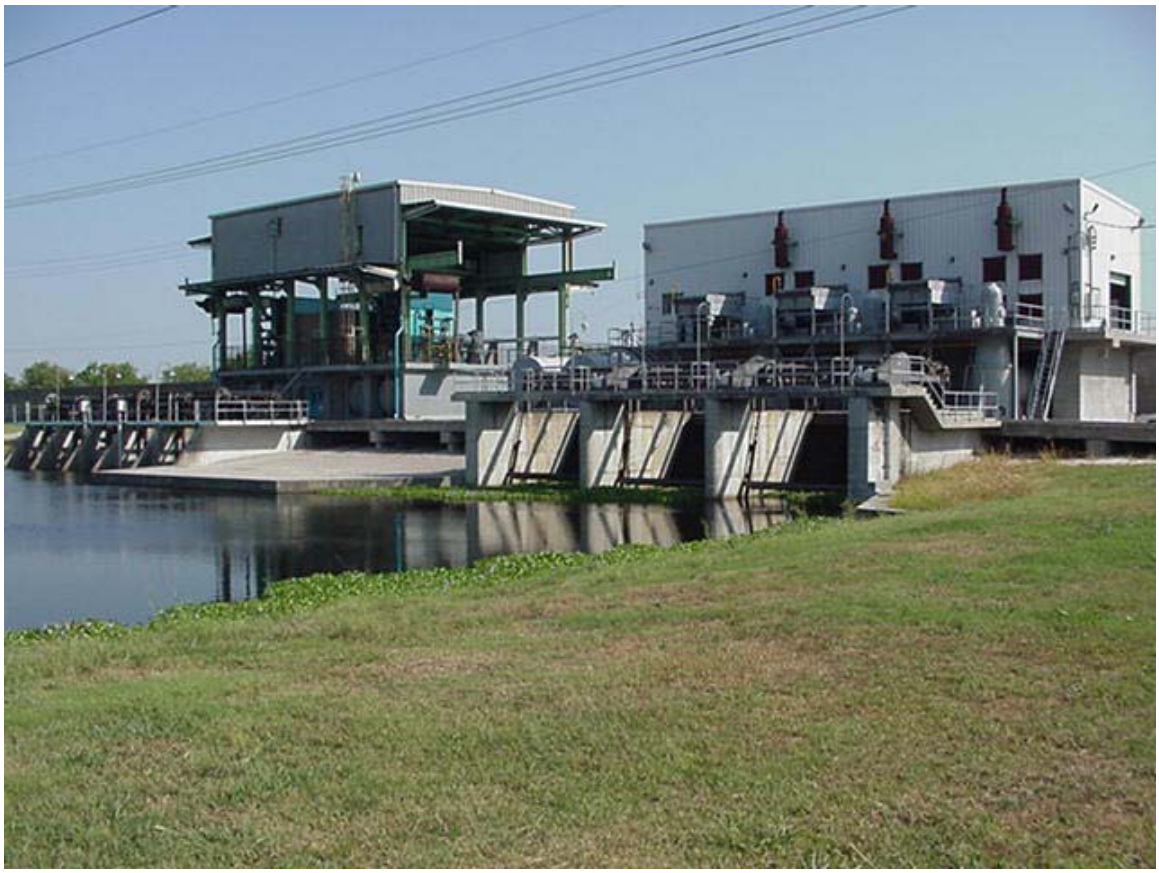
In additional to the cost estimates to repair damage resulting from Katrina for Pump Stations 2 and 3, cost estimates are included for improvements to reduce risk of flooding. The repair-only and repair-and-improve estimates are labeled Options 1 and 2 respectively. Option 2 consists of the cost of repair plus raising the engines and control room ten feet above grade. This would be accomplished by providing a separate pile supported 10 foot tall platform for support of the engines and control room. The remaining mechanically driven pumps will be replaced with hydraulic powered drainage pumps remotely connected to the engines.

Table of Contents

INSPECTION REPORTS

7. **BAYOU DUCROS PUMPING STATION No. 7**
   - Condition & Potential for Flooding
   - Pump Station Observation Sheet
   - Pump Station Inspection Sheet
   - Cost Estimates

8. **SAINT MARY PUMPING STATION No. 8**
   - Condition & Potential for Flooding
   - Pump Station Observation Sheet
   - Pump Station Inspection Sheet
   - Cost Estimates



FORTIFICATION PUMPING STATION #1 On Left

Name : Fortification Canal Pumping Station #1
Parish : St. Bernard
Address : 4200 B Jean Lafitte Pkwy., Chalmette La. 70043
Phone Numbers : 504-279-3642
Station Manager : Westley Bracamontes (beeper # 504-547-4216)
Position : Latitude 29:57:58.4 Longitude –89:58:29.5
Pump From : Florida Walk Forty Arpent Canal
Pump To: Wetlands To Rear Of Station and Bayou Bienvenue

Facility Floor Elevation: 16 ft. (N.G.V.D.)

Capacity (gpm)

Center Pump = 45,000 gpm East Pump = 250,000 gpm
West Pump =250,000 gpm

Pump Station Condition and Potential for Flood Proofing Checklist

FORTIFICATION PUMPING STATION #1

1. Pump Station Identification and location (including grid coordinates)
   Name : Fortification Canal Pumping Station #1
   Parish : St. Bernard
   Address : 4200 B Jean Lafitte Pkwy., Chalmette La. 70043
   Phone Numbers : 504-279-3642
   Station Manager : Westley Bracamontes (beeper # 504-547-4216)
   Position : Latitude 29:57:58.4 Longitude –89:58:29.5
   Pump From : Florida Walk Forty Arpent Canal
   Pump To: Wetlands To Rear Of Station and Bayou Bienvenue

2. Ever flooded?
   Only on lower level up to about 1 to 2 ft from bottom of concrete of upper level. Water level did not reach operating floor.

3. Flood watermark height above building floor
   n/a

4.. Building Walls
   a. Wall construction material (i.e. brick, concrete, metal)
      Reinforced concrete walls – lower level fuel tank containment areas.
      Brick control/compressor room – second level.
      Metal siding - upper portion of open second level.
   b. Height of non-porous material above building floor(i.e. brick, concrete, sealable metal)
      Eight feet – brick control/compressor room.

5. Floor
   a. Material (i.e. concrete)
      Concrete
   b. Condition (i.e. cracked, porous, non-porous)
      Good, non-porous.
   c. Floor drains (i.e. can be blocked to prevent backflow)
      n/a
   d. Sump pit to pump water from pump & driver area
      n/a

6. Roof
   a. Material (i.e. metal)
      Metal
   b. Condition (i.e. intact, damaged, repair schedule)

Damaged

7. Pumps
    a. Capacity of each pump, cfs
        Center Pump = 100 cfs
        East Pump = 557 cfs
        West Pump = 557 cfs

    b. Driver for each pump (i.e. electric motor, diesel motor, diesel motor/generator/electric motor combination)
        Center Pump = electric motor
        East Pump = diesel engine
        West Pump = diesel engine

    c. Condition of each pump/motor combination
        i. Operating
            West pump is operating
        ii. Needs scheduled repairs (identify)
            n/a
        iii. Inoperable - identify repair needs
            East pump has a cooling leak in need of repair.
            Center pump motor's circuit breaker trips after about 20 minutes.
        iv. Identify repair schedule if possible
            n/a

8. Overall condition of pump station facility
    a. Access (i.e. roads blocked by debris, roads clear,)
        access is ok, roads clear.
    b. Site (i.e. debris on grounds, mud inside building, cleaned)
        some debris on grounds, mud still inside of maintenance room on lower level.
    c. Type and status of Corps work (i.e. debris removal - complete)
        n/a
    d. Type and status of work by others (i.e. GE - drying motors - 50% complete)
        n/a
9. Power source
    a. Power lines (i.e. down, up and functioning, underground, repair schedule)
        up and functioning
    b. Transformers (i.e. above flood level, flooded, repair schedule)
        up and running
    c. Backup power (i.e. none, diesel/electric generator)
        diesel/electric generator for building emergency circuits only, not for electric motor driven pump, not for rakes, not for main air compressor used for diesel engine start.

    d. Potential to elevate primary and backup power source above flood level
        n/a – was not flooded.

10. Operator hurricane protection
    a. "Safe haven" for operators (i.e. bunker style non-flooding protection during floods)
        no
    b. Life support (i.e. potable water, toilets, showers, food)
        yes
    c. Can facility be operated from bunker?
        no

Pump Station Observation Sheet

Name of Pump Station and/or Pump Station No. - 1

Parish (drainage basin) where pump station is located: **St. Bernard Parish**

A. Number of Pumps – 3 Pumps

Pump Info (Circle the appropriate answer) The pumps may be operable and still be damaged. What about submersed equipment if any such as impellers? Pump capacity gpm (or cfs), Hp, Voltage, Cycles (Hz), discharge size, horizontal or vertical

West Pump: Drive Type - (Diesel Engine) Electric Motor Operable - (Yes) No

Remarks –

1. Engine is reported to be operable

Center Pump: Drive Type - Diesel Engine (Electric Motor) Operable - Yes (No)

Remarks –

1. Circuit breaker trips after motor has run for about 20 minutes. (Motor is 250HP, 2300V, 60 cycle.)

East Pump: Drive Type - (Diesel Engine) Electric Motor Operable - (Yes) No

Remarks –

1. One cylinder has a coolant leak, but the engine is reported to be operable

B. Auxiliary Equipment and Features (note damage and problems):

Incoming Electric Power Service:

1. Power was restored after Hurricane.

Standby Backup Power Equipment:

1. 15kW Generator Set not functional (fuses in gray generator control box blow shortly after engine is started).

Switchgear and/or Motor Control Centers:

1. Seems OK except for possible breaker problem described above.

Motor Feeder Power Cables and wiring: (motor cables and splice seals):

1. May be factor in motor circuit breaker tripping.

Pump Controls Systems:

1. No problems reported.

Fuel Systems and Supply:

1. Fuel tank vents came within a few inches of being covered with water otherwise the system is reported to be operable.

Compressed Air System:

1. Diesel air compressor leaks oil, gauges filled with water, air dryer was underwater.

Trash Racks:

1. Need to be cleaned

Trash Raking Equipment:

1. Bearings and gear boxes were underwater and should be rebuilt

Trash Rakes: N/A

Discharge Pipe Flap Gates:

1. East gate sticks in the closed position

Pump Station Building Structure:

1. The building structure, which is concrete, steel and brick structure, is in good condition. The upper level was not covered with water. No visible damage due to Hurricane Katrina, except for the wall siding. Sections of wall panels where damaged on the West and East walls. The entire wall siding on the North wall was damaged.
2. Workshop was underwater, but no visible structural damage. Work table is made of wood, and also was under water for several days, but no obvious damage was visible.
3. Trash screens where covered with water. No visible damage to the concrete structure or the screens. Work was done to the motors by the parish by replacing the 3 motors. The debris on top of the screen structure was not yet removed.

Pump Station Building Roof:

1. The steel roof structure is in good condition. Some roof panels at the North-West corners are missing.
2. Roof gutters on 4 corners are damaged and missing.

Pump Station Building Doors & Windows:

1. All doors and windows are in good condition.
2. Fence (6 foot section) on the west side is damaged.
3. Enclosure panels around the outside compressor are damaged.

Pump Station Mechanical Building Systems: [Mechanical Ventilation (Louvers & Fans)]:

1. Air compressor room exhaust fan is inoperable.

Pump Station Electrical Bldg. Systems: Building Power, Panelboard. Lights, Communications):

1. Pump station lower level equipment room requires thorough cleaning.
2. 7500W forced-air heater was submerged as was controller for compressed air dryer motor, along with three sets of on/off switches and duplex receptacles.
3. Two 1000W flood lights and two quartz lights were damaged.

4. Vent fan in office does not work (when switch is flipped, only a humming sound is heard).

Other:

1. Generator engine leaking oil.
2. Weed eater was underwater.
3. Pressure washer was under water.
4. Kubota and Bobcats were underwater.
5. Tools and fire extinguisher missing.
6. Station documentation needs to be located and reclaimed.
7. Space heater was underwater.
8. Hot water heater washed away by flood.

PUMP STATION INSPECTION REPORT

Name of Flood Control Works (Federal/Non-Federal):
St. Bernard Parish – Fortification Pumping Station No.1

Date/Hour Inspection Began/Ended:
Date: 11-31-05 Time: 11:00 AM

Inspectors:
Corps Representatives:

Drainage District Officials:

River/Forebay Elevations:
River El.: _____ Stage El.: _____ Zero Gage El.: _____
Forebay El.: _____ Stage El.: _____ Zero Gage El.: _____

General Comments:

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
SECTION I				***FOR USE DURING INITIAL ELIGIBILITY INSPECTION ONLY***	
1. Total Capacity			X	Record Total Pump Station Capacity.	Operating capacity of 1,114 cfs for 2 diesel pumps only. Electric pump not operational
SECTION II				***FOR USE DURING ALL PUMP STATION INSPECTIONS***	
2. Pump Station Building		X		A The Pump Station building is in good structural condition. No apparent major cracks in concrete, no subsidence, roof is not leaking, Intake louvers clean, clear of debris. Exhaust fans operational and maintained. Lights operational. Safe working environment. M Spalling and cracking are present, or minimal subsidence is evident, or roof leaks, or other conditions are present that need repair but do not threaten the structural integrity or stability of the building. U Any condition that does not meet at least Minimum Acceptable standard.	List Damages: 1. West side wall; section of wall panels (siding) where damaged. Approximately (5' high x 30' long) to be replaced. ***See Photo 1*** 2. East side wall; section of wall panels (siding) where damaged. Approximately (5' high x 30' long) to be replaced. ***See Photo 2*** 3. North side wall; the entire wall panels (siding) are missing. Approx. (7' high x 67' long) to be replaced. ***See Photo 3*** 4. Roof panels at the North-West corners are damaged. Approx. (15' wide x 15' long) to be replaced. ***See Photo 4*** 5. The entire roof gutters are damaged and missing and need to be replaced. ***See Photo 5*** 6. Fence section on the West side is damaged. Approx. (7' high x 6' long) section needs to be replaced. ***See Photo 6*** 7. Outside compressor enclosure siding and roof are damaged. Roof section (3'wide x 6.5' high) and side section (2' wide x 5' high) need to be replaced. ***See Photo 7*** 8. On/off switches and duplex receptacles in three locations went under water. See Photo 8 9. Two 1000W exterior floodlights. ***See Photo 9*** 10. Two quartz lights (on back of office and near west engine housing). ***See Photo 9*** 11. Vent fan in office does not operate (when switch is flipped-only makes humming sound). 12. Hot water heater under station floated away.

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
3. Pumps	X			A All pumps are fully operational. M All pumps are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next period of usage. U One or more primary pumps are not operational, or noted discrepancies have not been corrected.	List Major Problems/Damage:
4. Motors			X	A All items are fully operational. M All systems are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next expected period of usage. U One or more primary motors are not operational, or noted discrepancies have period of usage.	List Major Problems/Damage: 1. Electric pump motor will not run more than 20 minutes without tripping circuit breaker.
5. Engines		X		A All items are fully operational. M All systems are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next expected period of usage. U One or more primary motors are not operational, or noted discrepancies have period of usage.	List Major Problems/Damage: 1. Electrical conduit to west engine housing has pulled loose. 2. West engine has a cylinder cooling leak. ***See Photo 10***

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
6. Gear Reducers	X			A All items are fully operational. M All systems are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next expected period of usage. U One or more primary motors are not operational, or noted discrepancies have period of usage.	List Major Problems/Damage:
7. Sumps/Trash Racks/Trash Rakes			X	A Sumps/Trash Racks are free of concrete deterioration, protected from Permanent damage by corrosion and free of floating and sunken debris. Sumps are clear of Accumulated silt. Passing debris is minimized by spacing of trash rack bars. Trash rakes as applicable are fully operational. M Trash racks and sumps have some accumulated silt or debris but are not currently inhibiting the pump(s) performance. No periodic maintenance has been performed. Present condition could be expected to perform through the next expected period of usage provided removal of floating debris is accomplished. U Proper operation can not be ensured through the next period of usage. Possible damage could result to the pumping equipment with continued operation.	List Damage: 1. West rake motor does not run. ***2.*** Rake lights do not work. ***See Photo 11*** 3. Motor have been rebuilt, gear boxes have had oil changed, but damage from water intrusion has not been evaluated for gear boxes and drive bearings
8. Other Metallic Items				A All metal parts in plant/building show no signs of corrosion. M Corrosion on metallic parts (except equipment anchors) and deterioration period of usage. U Any condition that does not meet at least Minimum Acceptable standards.	List Damage: N/A

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
9. Ancillary Equipment i.e. Compressed Air Siphon Breakers Fuel Supply Vacuum Priming Pump Lubrication Heating/Ventilation Engine Cooling Engine Oil Filtering			X	A All equipment is fully operational. M Ancillary equipment is operational and deficiencies/minor discrepancies are such that equipment could be expected to perform through the next period of usage. U One or more of the equipment systems is inoperable. The present condition of the inoperable equipment could reduce the efficiency of the pump station or jeopardize the pump station's role in flood protection.	List Damage: 1. Electromode heater (7500W) was under water. ***See Photo 12*** 2. Controller for compressed air dryer motor (1/4HP) was under water. ***See Photo 13*** 3. Up/Down limit switch on overhead crane sticks. ***See Photos 14 & 15*** 4. Generator drive leaks oil. ***See Photo 16*** 5. Kubota was under water. ***See Photo 17*** 6. Case bobcat was under water. ***See Photo 18*** 7. Gauges on air tanks are full of water. ***See Photo 19*** 8. Equipment room requires cleaning. ***See Photo 20*** 9. Maintenance tools and fire extinguisher are missing. ***See Photo 21*** 10. Space heater was under water***. See Photo 22*** 11. Weedeater was under water. ***See Photo 23*** 12. Pressure washer was under water. ***See Photo 24*** 13. Generator engine leaking oil. ***See Photo 25*** 14. Diesel air compressor leaking oil and exhaust off. ***See Photo 26*** 15. Backpack sprayer was under water. 16. Garden hose needs replacement
10. Backup Ancillary Equipment (e.g. Standby Generator)			X	A Adequate, reliable, and enough capacity to meet demands. Backup units/equipment are properly sized, operational and in an overall well maintained condition. M Backup ancillary equipment is operational and deficiencies/minor discrepancies are such that equipment could be expected to perform through the next period of usage. U Backup ancillary equipment not considered reliable to sustain operations during flooding conditions. N/A Not Applicable if no backup equipment exists.	List Damage: 1. Generator set (15kW) is not functioning (fuses in gray generator control box blow shortly after engine is started).

11. Pump Control System				A Operational and maintained free of damage, corrosion, or other debris. M Operational with minor discrepancies. U Not operational, or uncorrected discrepancies	List Damage: N/A

12. Intake and Discharge Outlets			X	Functional. No damaging erosion evident. Opening/closing devices for vertical gates, flap gates, etc. are functional in a well-maintained condition. (A or U.)	List Damage: 1. East discharge gate stick shut. ***See Photo 27***
13. Wire Insulation and Splices (For pump stations with Electric pumps only)			X	A Visual inspection identifies that cable jackets and insulation have good integrity. Visual inspection identifies that splices and watertight seals have good integrity. M Visual inspection identifies that cable jackets and insulation may have damage and their reliability is suspect. Visual inspection identifies splices and watertight seals may have damage and their reliability is suspect. U Cable Jackets, Splices, and Watertight Seals are identified to have damage.	List Damage: 1. (Cables that were submerged.)
14. Final Remarks:					

GENERAL INSTRUCTIONS	1. All items on this guide must be addressed and a rating given. 2. The lowest single rating given will determine the overall rating for the pump station. 3. Additional areas for inspection will be incorporated by the inspector into this guide if the layout or physical characteristics of the pump station warrant this. Appropriate entries will be made in the REMARKS block. 4. Rating Codes: A - Acceptable M - Minimally Acceptable U - Unacceptable

The cost estimate information contained on this page is proprietary to the Government and can not be posted on the public website at this time.

GUICHARD PUMPING STATION #2

Name : Guichard Pumping Station #2

Parish : St. Bernard
Address : 4201 Jean Lafitte Pkwy., Chalmette La. 70043
Phone Numbers : None
Station Manager : Westley Bracamontes (beeper # 504-547-4216)
Position : Latitude 29:57:41.8 Longitude –89:57:52.2
Pump From : Florida Walk Forty Arpent Canal
Pump To: Wetlands To Rear Of Station and Bayou Bienvenue

Facility Floor Elevation: 0 ft. (N.G.V.D.)

Capacity (gpm)

Pump1 = 50,000 gpm
Pump2 = 100,000 gpm
Pump3 = 75,000 gpm
Pump4 = 100,000 gpm

Pump Station Condition and Potential for Flood Proofing Checklist

GUICHARD PUMPING STATION #2

Name : Guichard Pumping Station #2
Parish : St. Bernard
Address : 4201 Jean Lafitte Pkwy., Chalmette La. 70043
Phone Numbers : None
Station Manager : Westley Bracamontes (beeper # 504-547-4216)
Position : Latitude 29:57:41.8 Longitude –89:57:52.2
Pump From : Florida Walk Forty Arpent Canal
Pump To: Wetlands To Rear Of Station and Bayou Bienvenue

Facility Floor Elevation: 0 ft. (N.G.V.D.)

Capacity (gpm)

Pump1 = 50,000 gpm
Pump2 = 100,000 gpm
Pump3 = 75,000 gpm
Pump4 = 100,000 gpm

2. Ever flooded?
   Yes

3. Flood watermark height above building floor
   6 to 7 feet.

4.. Building Walls
   a. Wall construction material (i.e. brick, concrete, metal)
      Steel frame and metal siding.
   b. Height of non-porous material above building floor(i.e. brick, concrete, sealable metal)
      None.

5. Floor
   a. Material (i.e. concrete)
      Concrete
   b. Condition (i.e. cracked, porous, non-porous)
      Unknown, covered in debris and silt.
   c. Floor drains (i.e. can be blocked to prevent backflow)
      n/a
   d. Sump pit to pump water from pump & driver area
      n/a

6. Roof
    a. Material (i.e. metal)
        Metal
    b. Condition (i.e. intact, damaged, repair schedule)
        Sever damage.

7. Pumps
    a. Capacity of each pump, cfs
        Pump1 = 111 cfs
        Pump2 = 222 cfs
        Pump3 = 167 cfs
        Pump4 = 222 cfs
    b. Driver for each pump (i.e. electric motor, diesel motor, diesel motor/generator/electric motor combination)
        Pumps 1, 2, and 4 – Diesel engine powered hydraulic system.
        Pump 3 – Diesel engine.
    c. Condition of each pump/motor combination
        i. Operating
        ii. Needs scheduled repairs (identify)
            n/a
        iii. Inoperable - identify repair needs
            Pumps have not been run since Katrina.
            Hydraulic system that powers pumps 1, 2, & 4 may be damaged due to having been submerged.
            Diesel driven pump No 3 has leaks due to corrosion and cannot be primed by vacuum system.
            Diesel engines are probably damaged due to having been submerged.
        iv. Identify repair schedule if possible
            Unknown.

8. Overall condition of pump station facility
    a. Access (i.e. roads blocked by debris, roads clear,)
        access is ok, roads clear.
    b. Site (i.e. debris on grounds, mud inside building, cleaned)
        Station interior is filled with debris and silt.
    c. Type and status of Corps work (i.e. debris removal - complete)
        n/a
    d. Type and status of work by others (i.e. GE - drying motors - 50% complete)
        n/a
9. Power source
    a. Power lines (i.e. down, up and functioning, underground, repair schedule)
        Utility company power not working, no schedule for resumption of service yet.
    b. Transformers (i.e. above flood level, flooded, repair schedule)
        Location intact on pole, not known if functional since there is no service to transformer yet.

c. Backup power (i.e. none, diesel/electric generator)

There is no generator, diesel engines startup by battery power.

d. Potential to elevate primary and backup power source above flood level

n/a

10. Operator hurricane protection

a. "Safe haven" for operators (i.e. bunker style non-flooding protection during floods)

no

b. Life support (i.e. potable water, toilets, showers, food)

no

c. Can facility be operated from bunker?

no

Pump Station Observation Sheet

Name of Pump Station and/or Pump Station No. - GUICHARD PUMPING STATION No. 2

Parish (drainage basin) where pump station is located: **St. Bernard Parish**

A. Number of Pumps – 4 Pumps

Pump Info (Circle the appropriate answer) The pumps may be operable and still be damaged. What about submersed equipment if any such as impellers? Pump capacity gpm (or cfs), Hp, Voltage, Cycles (Hz), discharge size, horizontal or vertical

Pump No. 1: Drive Type - (Diesel Engine) Electric Motor Operable - Yes (No)

Remarks -

1. The engine was submerged for 6 days and is still full of water. The hydraulic drive system is a sealed system. It needs to be inspected and repaired as needed.

Pump No. 2: Drive Type - (Diesel Engine) Electric Motor Operable - Yes (No)

Remarks -

1. The engine was submerged for 6 days and is still full of water. The hydraulic drive system is a sealed system. It needs to be inspected and repaired as needed

Pump No. 3 Drive Type - (Diesel Engine) Electric Motor Operable - Yes (No)

Remarks -

1. The engine was submerged for 6 days and is still full of water. The hydraulic drive system is a sealed system. It needs to be inspected and repaired as needed

P ump No 4: Drive Type - (Diesel Engine) Electric Motor Operable - Yes (No)

Remarks -

1. The engine was submerged for 6 days and is still full of water. This is a direct drive unit so the pump was probably not damaged further by the hurricane..

B. Auxiliary Equipment and Features (note damage and problems):

Incoming Electric Power Service:

1. No power.

Standby Backup Power Equipment:

1. No backup power

Switchgear and/or Motor Control Centers:

1. N/A

Motor Feeder Power Cables and wiring: (motor cables and splice seals):

1. N/A

Pump Controls Systems:

1. The engine controls are damaged beyond repair

Fuel Systems and Supply:

1. Storage tank is no longer on its foundation and the days tanks were submerged.

Compressed Air System:

1. The compressor and motors were submerged by the flood. If pump no. 4 cannot be repaired the compressor is no longer needed.

Trash Racks:

1. Trash racks are made of wood. No debris was found. The screens are in good condition.

Trash Raking Equipment: N/A

Trash Rakes: N/A

Discharge Pipe Flap Gates:

1. None

Pump Station Building Structure:

1. The building structure, consist of concrete foundation, concrete parameter wall, and steel structure. The building is approx. 45' wide x 62' long x 25' high roof.
2. The building steel structure and siding are totally damaged on all 4 sides. The structure is rusted and unstable.
3. The equipment concrete foundations seem ok. But the building concrete wall has major cracks, which may be contributed to age.
4. The Diesel Fuel storage tank has moved off its concrete saddle foundations during the Hurricane.

Pump Station Building Roof:

1. The steel roof structure is rusted and in bad condition. Some roof panels are blown off the roof and missing.

Pump Station Building Doors & Windows:

1. All doors and windows are damaged.

Pump Station Mechanical Building Systems: [Mechanical Ventilation (Louvers & Fans)]:

1. Station does not include louvers or fans.

Pump Station Electrical Bldg. Systems: Building Power, Panelboard. Lights, Communications):

1. All exterior and at least 80% of ~30 interior lights were damaged (unable to determine whether lights that appeared undamaged could actually function because power has not been restored to facility).
2. Panelboard for lighting and duplex receptacles had gone under water.
3. Approximately 6-10 duplex receptacles had been under water.

Other:

1. The vacuum pumps were submerged by the flood for 6 days. If engine no. 4 cannot be repaired the vacuum pump is no longer needed.

PUMP STATION INSPECTION REPORT

Name of Flood Control Works (Federal/Non-Federal):
St. Bernard Parish – GUICHARD Pump Station No. 2

Date/Hour Inspection Began/Ended:
Date: 10-31-05 Time: 12:00 PM

Inspectors:
Corps Representatives:

Drainage District Officials:

River/Forebay Elevations:
River El.: _____ Stage El.: _____ Zero Gage El.: _____
Forebay El.: _____ Stage El.: _____ Zero Gage El.: _____

General Comments:

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
SECTION I				***FOR USE DURING INITIAL ELIGIBILITY INSPECTION ONLY***	
1. Total Capacity			X	Record Total Pump Station Capacity.	0.00 cfs
SECTION II				***FOR USE DURING ALL PUMP STATION INSPECTIONS***	
2. Pump Station Building			X	A The Pump Station building is in good structural condition. No apparent major cracks in concrete, no subsidence, roof is not leaking, Intake louvers clean, clear of debris. Exhaust fans operational and maintained. Lights operational. Safe working environment. M Spalling and cracking are present, or minimal subsidence is evident, or roof leaks, or other conditions are present that need repair but do not threaten the structural integrity or stability of the building. U Any condition that does not meet at least Minimum Acceptable standard.	List Damages: 1. The building structure, consist of concrete foundation, concrete parameter wall, and steel structure. The building is approx. 45' wide x 62' long x 25' high roof. ***See Photo 28*** 2. The building steel structure and siding are totally damaged on all 4 sides. The structure is rusted and unstable. ***See Photos 29, 30 & 31*** 3. The equipment concrete foundations seem ok. But the building concrete wall has major cracks, which may be contributed to age***. See Photo 32*** 4. The building structure does not meet the current minimum code standard***. See Photos 29, 30, & 31*** 5. All exterior and at least 80% of ~30 interior lights damaged. (was unable to determine whether lights that appeared undamaged could actually function because power has not been restored to facility). ***See Photos 33, 34 & 35*** 6. Duplex receptacles (~6-10) went under water 7. Panelboard (18 ckt- 7 ckts actually used) for lighting and receptacles went under water. ***See Photo 36***
3. Pumps			X	A All pumps are fully operational. M All pumps are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next period of usage. U One or more primary pumps are not operational, or noted discrepancies have not been corrected.	List Major Problems/Damage: 1. Pump no. 4 is probably not damaged by the hurricane, but it is not functional because of air leaks. It is unlikely that the engine can be repaired or replaced in time to meet the completion schedule. ***See Photo 37*** 2. No. 1, 2, and 3 pumps hydraulic motor driven pumps require rebuilding to assure that they will function reliability since they may have been contaminated when the station was flooded. ***See Photo 38***

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
4. Motors				A All items are fully operational. M All systems are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next expected period of usage. U One or more primary motors are not operational, or noted discrepancies have period of usage.	List Major Problems/Damage:
5. Engines			X	A All items are fully operational. M All systems are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next expected period of usage. U One or more primary motors are not operational, or noted discrepancies have period of usage.	List Major Problems/Damage: 1. All four engines were flooded. The three the newer units can be overhauled and tested. It may not be possible to repaired or replace the third pump to meet the schedule. ***See Photos 39 & 40***
6. Gear Reducers				A All items are fully operational. M All systems are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next expected period of usage. U One or more primary motors are not operational, or noted discrepancies have period of usage.	List Major Problems/Damage: N/A Direct drive or hydraulic drive pumps.

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
7. Sumps/Trash Racks/Trash Rakes	X			A Sumps/Trash Racks are free of concrete deterioration, protected from Permanent damage by corrosion and free of floating and sunken debris. Sumps are clear of Accumulated silt. Passing debris is minimized by spacing of trash rack bars. Trash rakes as applicable are fully operational. M Trash racks and sumps have some accumulated silt or debris but are not currently inhibiting the pump(s) performance. No periodic maintenance has been performed. Present condition could be expected to perform through the next expected period of usage provided removal of floating debris is accomplished. U Proper operation can not be ensured through the next period of usage. Possible damage could result to the pumping equipment with continued operation.	List Damage:
8. Other Metallic Items				A All metal parts in plant/building show no signs of corrosion. M Corrosion on metallic parts (except equipment anchors) and deterioration period of usage. U Any condition that does not meet at least Minimum Acceptable standards.	List Damage:
9. Ancillary Equipment i.e. Compressed Air Siphon Breakers Fuel Supply Vacuum Priming Pump Lubrication Heating/Ventilation Engine Cooling Engine Oil Filtering			X	A All equipment is fully operational. M Ancillary equipment is operational and deficiencies/minor discrepancies are such that equipment could be expected to perform through the next period of usage. U One or more of the equipment systems is inoperable. The present condition of the inoperable equipment could reduce the efficiency of the pump station or jeopardize the pump station's role in flood protection.	List Damage: 1. All ancillary equipment was flooded and it will all require repair or replacement. ***See Photo 41***

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
10. Backup Ancillary Equipment (e.g. Standby Generator)				A Adequate, reliable, and enough capacity to meet demands. Backup units/equipment are properly sized, operational and in an overall well maintained condition. M Backup ancillary equipment is operational and deficiencies/minor discrepancies are such that equipment could be expected to perform through the next period of usage. U Backup ancillary equipment not considered reliable to sustain operations during flooding conditions. N/A Not Applicable if no backup equipment exists.	List Damage: 1. N/A
11. Pump Control System			X	A Operational and maintained free of damage, corrosion, or other debris. M Operational with minor discrepancies. U Not operational, or uncorrected discrepancies	List Damage: 1. The control systems were flooded and will require replacement since it is unlikely that they can be economically repaired. ***See Photo 41***
12. Intake and Discharge Outlets			X	Functional. No damaging erosion evident. Opening/closing devices for vertical gates, flap gates, etc. are functional in a well-maintained condition. (A or U.)	List Damage: 1. There is no reliable backflow prevention system. Pressurization of the pumps without the operator in attendance does not provide reliable operation. ***See Photo 42***
13. Wire Insulation and Splices (For pump stations with Electric pumps only)				A Visual inspection identifies that cable jackets and insulation have good integrity. Visual inspection identifies that splices and watertight seals have good integrity. M Visual inspection identifies that cable jackets and insulation may have damage and their reliability is suspect. Visual inspection identifies splices and watertight seals may have damage and their reliability is suspect. U Cable Jackets, Splices, and Watertight Seals are identified to have damage.	List Damage:

14. Final Remarks:

PUMP STATION MAINTENANCE INSPECTION GUIDE

GENERAL INSTRUCTIONS

1. All items on this guide must be addressed and a rating given.
2. The lowest single rating given will determine the overall rating for the pump station.
3. Additional areas for inspection will be incorporated by the inspector into this guide if the layout or physical characteristics of the pump station warrant this. Appropriate entries will be made in the REMARKS block.
4. Rating Codes:
   - A - Acceptable
   - M - Minimally Acceptable
   - U - Unacceptable

The cost estimate information contained on this page is proprietary to the Government and can not be posted on the public website at this time.

BAYOU VILLERE PUMPING STATION #3

Name : Bayou Villere Pumping Station #3
Parish : St. Bernard
Address 3700 Bartolo, Meraux, La. 70075
Phone Numbers : None
Station Manager : Westley Bracamontes (beeper # 504-547-4216)
Position : Latitude 29:57:05 Longitude –89:56.03.3
Pump From : Florida Walk Forty Arpent Canal
Pump To: Wetlands To Rear Of Station and Bayou Bienvenue

Facility Floor Elevation: 10 ft. (N.G.V.D.)

Capacity (gpm)

Pump1 = 75,000 gpm
Pump2 = 50,000 gpm
Pump3 = 100,000 gpm

Pump Station Condition and Potential for Flood Proofing Checklist

BAYOU VILLERE PUMPING STATION #3

Name : Bayou Villere Pumping Station #3
Parish : St. Bernard
Address 3700 Bartolo, Meraux, La. 70075
Phone Numbers : None
Station Manager : Westley Bracamontes (beeper # 504-547-4216)
Position : Latitude 29:57:05 Longitude –89:56.03.3
Pump From : Florida Walk Forty Arpent Canal
Pump To: Wetlands To Rear Of Station and Bayou Bienvenue

Facility Floor Elevation: 10 ft. (N.G.V.D.)

Capacity (gpm)

Pump1 = 75,000 gpm
Pump2 = 50,000 gpm
Pump3 = 100,000 gpm

2. Ever flooded?
   Yes

3. Flood watermark height above building floor
   Approximately 8 feet.

4.. Building Walls
   a. Wall construction material (i.e. brick, concrete, metal)
      Steel frame and metal siding.
   b. Height of non-porous material above building floor(i.e. brick, concrete, sealable metal)
      None.

5. Floor
   a. Material (i.e. concrete)
      Concrete
   b. Condition (i.e. cracked, porous, non-porous)
      Non-porous.
   c. Floor drains (i.e. can be blocked to prevent backflow)
      n/a
   d. Sump pit to pump water from pump & driver area
      n/a

6. Roof
    a. Material (i.e. metal)
        Metal
    b. Condition (i.e. intact, damaged, repair schedule)
        Sever damage.

7. Pumps
    a. Capacity of each pump, cfs
        Pump1 = 167 cps
        Pump2 = 111 cps
        Pump3 = 222 cps
    b. Driver for each pump (i.e. electric motor, diesel motor, diesel motor/generator/electric motor combination)
        Pumps 1 and 3 – Diesel engine powered hydraulic system.
        Pump 2 – Diesel engine.
    c. Condition of each pump/motor combination
        i. Operating
        ii. Needs scheduled repairs (identify)
            n/a
        iii. Inoperable - identify repair needs
            Pumps have not been run since Katrina.
            Hydraulic system that powers pumps 1 & 3 may be damaged due to having been submerged.
            Diesel engines are probably damaged due to having been submerged.
        iv. Identify repair schedule if possible
            Unknown.

8. Overall condition of pump station facility
    a. Access (i.e. roads blocked by debris, roads clear,)
        access is ok, roads clear.
    b. Site (i.e. debris on grounds, mud inside building, cleaned)
        Minor debris at site.
    c. Type and status of Corps work (i.e. debris removal - complete)
        n/a
    d. Type and status of work by others (i.e. GE - drying motors - 50% complete)
        n/a
9. Power source
    a. Power lines (i.e. down, up and functioning, underground, repair schedule)
        Utility company power not working, no schedule for resumption of service yet.
    b. Transformers (i.e. above flood level, flooded, repair schedule)
        Location intact on pole, not known if functional since there is no service to transformer yet.
    c. Backup power (i.e. none, diesel/electric generator)
        There is no generator, diesel engines startup by battery power.
    d. Potential to elevate primary and backup power source above flood level
        n/a

10. Operator hurricane protection
    a. "Safe haven" for operators (i.e. bunker style non-flooding protection during floods)
        no
    b. Life support (i.e. potable water, toilets, showers, food)
        no
    c. Can facility be operated from bunker?
        no

Pump Station Observation Sheet

Name of Pump Station and/or Pump Station No. – BAYOU VILLERE PUMPING STATION No. 3

Parish (drainage basin) where pump station is located: **St. Bernard Parish**

A. Number of Pumps – 3 Pumps

Pump Info (Circle the appropriate answer) The pumps may be operable and still be damaged. What about submersed equipment if any such as impellers? Pump capacity gpm (or cfs), Hp, Voltage, Cycles (Hz), discharge size, horizontal or vertical

Pump No. 1: Drive Type - (Diesel Engine) Electric Motor Operable - Yes (No)

Remarks –

1. The engine was submerged for 6 days and is still full of water. The hydraulic drive system is a sealed system, but it needs to be inspected and repaired as needed

Pump No. 2: Drive Type - (Diesel Engine) Electric Motor Operable - Yes (No)

Remarks –

1. The engine was submerged for 6 days and is still full of water. The hydraulic drive system is a sealed system, but it needs to be inspected and repaired as needed.

Pump No. 3: Drive Type - (Diesel Engine) Electric Motor Operable - Yes (No)

Remarks –

1. The engine was submerged for 6 days and is still full of water. This is a direct drive unit, so the pump was probably not damaged further by the hurricane

B. Auxiliary Equipment and Features (note damage and problems):

Incoming Electric Power Service:

1. Utility has not yet restored electric power to the transformers feeding the facility.

Standby Backup Power Equipment:

1. No backup power

Switchgear and/or Motor Control Centers:

1. n/a

Motor Feeder Power Cables and wiring: (motor cables and splice seals):

1. n/a

Pump Controls Systems:

1. Damaged from flood

Fuel Systems and Supply:

1. Storage tank is no longer on foundation

Compressed Air System:

1. Flooded

Trash Racks:

1. Trash racks are made of wood. No debris was found. The screens are in good condition.

Trash Raking Equipment: N/A

Trash Rakes: N/A

Discharge Pipe Flap Gates:

1. none

Pump Station Building Structure:

1. The building structure, consist of concrete foundation, concrete parameter wall, and steel structure. The building is approx. 45' wide x 62' long x 25' high roof.
2. The building steel structure is in fair condition, some rusted column bases and beams.
3. Sidings on all 4 sides at the lower half of the building are damaged up to 15' from the bottom.
4. The bottom angle supports for the siding are eroded.
5. The interior slab of the building looks clean. Some debris and silt was found in the pipe trenches.
6. The equipment foundation seems in good condition.
7. The building foundation and parameter wall seems in good condition.

Pump Station Building Roof:

1. Roof is in good condition. No damage

Pump Station Building Doors & Windows:

1. All doors and windows are damaged.
2. West wall; Double door 8' wide x 12' high damaged.
3. South wall; (2) 3' wide x 7' high doors are damaged.
4. North wall; All pump suctions (4' x 4') are damaged.

Pump Station Mechanical Building Systems: [Mechanical Ventilation (Louvers & Fans)]:

1. Air system, vacuum system, fuel system, vent systems were all flooded

Pump Station Electrical Bldg. Systems: Building Power, Panelboard. Lights, Communications):

1. All exterior and at least 50% of ~20 interior lights were damaged (unable to determine whether lights that appeared undamaged could actually function because power has not been restored to facility).
2. Panelboard (18 ckt- either 7 or 8 ckts actually used) for lighting and duplex receptacles had gone under water.
3. Approximately 6-10 duplex receptacles had been under water.

Other:

1. none

PUMP STATION INSPECTION REPORT

Name of Flood Control Works (Federal/Non-Federal):
St. Bernard Parish – BAYOU VILLERE Pump Station No. 3

Date/Hour Inspection Began/Ended:
Date: 10-31-05 Time: 2:00 PM

Inspectors:
Corps Representatives:

Drainage District Officials:

River/Forebay Elevations:
River El.: _____ Stage El.: _____ Zero Gage El.: _____
Forebay El.: _____ Stage El.: _____ Zero Gage El.: _____

General Comments:

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
SECTION I				***FOR USE DURING INITIAL ELIGIBILITY INSPECTION ONLY***	
1. Total Capacity				Record Total Pump Station Capacity.	
SECTION II				***FOR USE DURING ALL PUMP STATION INSPECTIONS***	
2. Pump Station Building			X	A The Pump Station building is in good structural condition. No apparent major cracks in concrete, no subsidence, roof is not leaking, Intake louvers clean, clear of debris. Exhaust fans operational and maintained. Lights operational. Safe working environment. M Spalling and cracking are present, or minimal subsidence is evident, or roof leaks, or other conditions are present that need repair but do not threaten the structural integrity or stability of the building. U Any condition that does not meet at least Minimum Acceptable standard.	List Damages: 1. The building structure, consist of concrete foundation, concrete parameter wall, and steel structure. The building is approx. 45' wide x 62' long x 25' high roof. ***See Photo 43*** 2. The building structure does not meet the minimum code standards. ***See Photo 44*** 3. The building steel structure is in fair condition, some rusted column bases and beams. Need to be repaired. See ***Photos 45, 46 & 47*** 4. Sidings on all 4 sides at the lower half of the building are damaged up to 15' from the bottom. The entire wall siding need to be replaced. ***See Photos 48, 49, 50 & 51*** 5. The bottom angle supports for the siding are eroded and to be replaced. ***See Photo 52*** 6. The interior slab of the building looks clean. Some debris and silt was found in the pipe trenches. The trenches need to clear from debris. ***See Photo 53*** 7. All exterior and at least half of ~20 interior lights damaged (was unable to determine whether lights that appeared undamaged could actually function because power has not been restored to facility). ***See Photos 54 & 55*** 8. Duplex receptacles (~6-10) went under water. 9. Panelboard (18 ckt-either 7 or 8 ckts actually used) for lighting and receptacles went under water. ***See Photo 56***

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
3. Pumps			X	A All pumps are fully operational. M All pumps are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next period of usage. U One or more primary pumps are not operational, or noted discrepancies have not been corrected.	List Major Problems/Damage: 1. Pumps 1, and 2 hydraulic motors require rebuilding to assure that they will function reliability since they were likely contaminated when the station was flooded. ***See Photos 57 & 58***
4. Motors				A All items are fully operational. M All systems are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next expected period of usage. U One or more primary motors are not operational, or noted discrepancies have period of usage.	List Major Problems/Damage: 1. No electric drive pumps.
5. Engines			X	A All items are fully operational. M All systems are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next expected period of usage. U One or more primary motors are not operational, or noted discrepancies have period of usage.	List Major Problems/Damage: 1. All three engines and the two hydraulic drives were flooded and required a complete overhaul and testing. ***See Photo 59 & 60***

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
6. Gear Reducers				A All items are fully operational. M All systems are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next expected period of usage. U One or more primary motors are not operational, or noted discrepancies have period of usage.	List Major Problems/Damage: 1. N/A Direct drive or hydraulic drive pumps.
7. Sumps/Trash Racks/Trash Rakes	X			A Sumps/Trash Racks are free of concrete deterioration, protected from Permanent damage by corrosion and free of floating and sunken debris. Sumps are clear of Accumulated silt. Passing debris is minimized by spacing of trash rack bars. Trash rakes as applicable are fully operational. M Trash racks and sumps have some accumulated silt or debris but are not currently inhibiting the pump(s) performance. No periodic maintenance has been performed. Present condition could be expected to perform through the next expected period of usage provided removal of floating debris is accomplished. U Proper operation can not be ensured through the next period of usage. Possible damage could result to the pumping equipment with continued operation.	List Damage: 1. Trash racks are in serviceable condition.
8. Other Metallic Items				A All metal parts in plant/building show no signs of corrosion. M Corrosion on metallic parts (except equipment anchors) and deterioration period of usage. U Any condition that does not meet at least Minimum Acceptable standards.	List Damage:

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
9. Ancillary Equipment i.e. Compressed Air Siphon Breakers Fuel Supply Vacuum Priming Pump Lubrication Heating/Ventilation Engine Cooling Engine Oil Filtering			X	A All equipment is fully operational. M Ancillary equipment is operational and deficiencies/minor discrepancies are such that equipment could be expected to perform through the next period of usage. U One or more of the equipment systems is inoperable. The present condition of the inoperable equipment could reduce the efficiency of the pump station or jeopardize the pump station's role in flood protection.	List Damage: 1. Vacuum Pump (10HP) and controller were submerged for at least five days. ***See Photo 61*** 2. All ancillary equipment was flooded it will all require repair or replacement. ***See Photos 62, 63, 64 & 65***
10. Backup Ancillary Equipment (e.g. Standby Generator)			X	A Adequate, reliable, and enough capacity to meet demands. Backup units/equipment are properly sized, operational and in an overall well maintained condition. M Backup ancillary equipment is operational and deficiencies/minor discrepancies are such that equipment could be expected to perform through the next period of usage. U Backup ancillary equipment not considered reliable to sustain operations during flooding conditions. N/A Not Applicable if no backup equipment exists.	List Damage: 1. The backup vacuum system was submerged by the flood and will require repair or replacement.
11. Pump Control System			X	A Operational and maintained free of damage, corrosion, or other debris. M Operational with minor discrepancies. U Not operational, or uncorrected discrepancies	List Damage: 1. The control systems were flooded and will require replacement.
12. Intake and Discharge Outlets				Functional. No damaging erosion evident. Opening/closing devices for vertical gates, flap gates, etc. are functional in a well-maintained condition. (A or U.)	List Damage:

13. Wire Insulation and Splices (For pump stations with Electric pumps only)				A Visual inspection identifies that cable jackets and insulation have good integrity. Visual inspection identifies that splices and watertight seals have good integrity. M Visual inspection identifies that cable jackets and insulation may have damage and their reliability is suspect. Visual inspection identifies splices and watertight seals may have damage and their reliability is suspect. U Cable Jackets, Splices, and Watertight Seals are identified to have damage.	List Damage:

PUMP STATION MAINTENANCE INSPECTION GUIDE

14. Final Remarks:

1. Final Remarks: In order to meet the project schedule a concept such as building a separate operator building, elevate the engines, replace the existing engine and pump with a highspeed diesel and hydraulic pump, and enclose the engines for weather protection needs to be considered.

GENERAL INSTRUCTIONS

1. All items on this guide must be addressed and a rating given.
2. The lowest single rating given will determine the overall rating for the pump station.
3. Additional areas for inspection will be incorporated by the inspector into this guide if the layout or physical characteristics of the pump station warrant this. Appropriate entries will be made in the REMARKS block.
4. Rating Codes:
   A - Acceptable
   M - Minimally Acceptable
   U - Unacceptable

The cost estimate information contained on this page is proprietary to the Government and can not be posted on the public website at this time.

MERAUX PUMPING STATION #4

Name : Meraux Pumping Station #4
Parish : St. Bernard
Address 3200 Guerra Dr. Violet, La. 70092
Phone Numbers : 504-682-0941
Station Manager : Westley Bracamontes (beeper # 504-547-4216)
Position : Latitude 29:55:16.2 Longitude –89:53:28.1
Pump From : Florida Walk Forty Arpent Canal
Pump To: Wetlands To Rear Of Station and Bayou Dupre

Facility Floor Elevation: 16 ft. (N.G.V.D.)

Capacity (gpm)

Center Pump = 45,000 gpm
East Pump = 250,000 gpm
West Pump = 250,000 gpm

Pump Station Condition and Potential for Flood Proofing Checklist

MERAUX PUMPING STATION #4

Name : Meraux Pumping Station #4
Parish : St. Bernard
Address 3200 Guerra Dr. Violet, La. 70092
Phone Numbers : 504-682-0941
Station Manager : Westley Bracamontes (beeper # 504-547-4216)
Position : Latitude 29:55:16.2 Longitude –89:53:28.1
Pump From : Florida Walk Forty Arpent Canal
Pump To: Wetlands To Rear Of Station and Bayou Dupre

Facility Floor Elevation: 16 ft. (N.G.V.D.)

Capacity (gpm)

Center Pump = 45,000 gpm
East Pump = 250,000 gpm
West Pump = 250,000 gpm

2. Ever flooded?
   Only on lower level up to about 1 to 2 ft from bottom of concrete of upper level. Water level did not reach operating floor.

3. Flood watermark height above building floor
   n/a

4.. Building Walls
   a. Wall construction material (i.e. brick, concrete, metal)
      Reinforced concrete walls – lower level fuel tank containment areas.
      Brick control/compressor room – second level.
      Metal siding - upper portion of open second level.
   b. Height of non-porous material above building floor(i.e. brick, concrete, sealable metal)
      Eight feet – brick control/compressor room.

5. Floor
   a. Material (i.e. concrete)
      Concrete
   b. Condition (i.e. cracked, porous, non-porous)
      Good, non-porous.
   c. Floor drains (i.e. can be blocked to prevent backflow)
      n/a
   d. Sump pit to pump water from pump & driver area

n/a

6. Roof
   a. Material (i.e. metal)
      Metal
   b. Condition (i.e. intact, damaged, repair schedule)
      Damaged

7. Pumps
   a. Capacity of each pump, cfs
      Center Pump = 100 cfs
      East Pump = 557 cfs
      West Pump = 557 cfs

   b. Driver for each pump (i.e. electric motor, diesel motor, diesel motor/generator/electric motor combination)
      Center Pump = electric motor
      East Pump = diesel engine
      West Pump = diesel engine

   c. Condition of each pump/motor combination
      i. Operating
         2 diesel pumps are operational
      ii. Needs scheduled repairs (identify)
         n/a
      iii. Inoperable - identify repair needs
         Electric motor has no power for operation or testing.
      iv. Identify repair schedule if possible
         n/a

8. Overall condition of pump station facility
   a. Access (i.e. roads blocked by debris, roads clear,)
      access road is in need of minor resurfacing for about 50 ft., otherwise roads are clear.
   b. Site (i.e. debris on grounds, mud inside building, cleaned)
      some debris on grounds, mud still inside of maintenance room on lower level.
   c. Type and status of Corps work (i.e. debris removal - complete)
      n/a
   d. Type and status of work by others (i.e. GE - drying motors - 50% complete)
      n/a
9. Power source
   a. Power lines (i.e. down, up and functioning, underground, repair schedule)
      Utility company power not working, no schedule for resumption of service yet.
   b. Transformers (i.e. above flood level, flooded, repair schedule)
      Location intact on pole, not known if functional since there is no service to transformer yet.

c. Backup power (i.e. none, diesel/electric generator)

diesel/electric generator for building emergency circuits only, not for electric motor driven pump, not for rakes, not for main air compressor used for diesel engine start.

d. Potential to elevate primary and backup power source above flood level

n/a – was not flooded.

10. Operator hurricane protection

a. "Safe haven" for operators (i.e. bunker style non-flooding protection during floods)

no

b. Life support (i.e. potable water, toilets, showers, food)

yes

c. Can facility be operated from bunker?

no

Pump Station Observation Sheet

Name of Pump Station and/or Pump Station No. – MERAUX PUMPING STATION No. 4

Parish (drainage basin) where pump station is located: **St. Bernard Parish**

A. Number of Pumps – 3 Pumps

Pump Info (Circle the appropriate answer) The pumps may be operable and still be damaged. What about submersed equipment if any such as impellers? Pump capacity gpm (or cfs), Hp, Voltage, Cycles (Hz), discharge size, horizontal or vertical

West Pump: Drive Type - (Diesel Engine) Electric Motor Operable - (Yes) No

Remarks –

1. Discharge gates are damaged.

Center Pump: Drive Type - Diesel Engine (Electric Motor) Operable - Yes No

Remarks –

1. No electric power to test the pump.

East Pump: Drive Type - (Diesel Engine) Electric Motor Operable - (Yes) No

Remarks –

1. Discharge gates are damaged.

B. Auxiliary Equipment and Features (note damage and problems):

Incoming Electric Power Service:

1. Utility has not yet gotten power back to the transformers that supply the facility.

Standby Backup Power Equipment:

1. 15kW Generator Set not functional (engine start blows fuses in gray generator control box).

Switchgear and/or Motor Control Centers:

1. OK.

Motor Feeder Power Cables and wiring: (motor cables and splice seals):

1. OK.

Pump Controls Systems:

1. Pyrometers and switching valves are inoperable

Fuel Systems and Supply:

1. Storage tanks need to be inspected and chemically cleaned if rusted internally.

Compressed Air System:

1. Backup diesel unit doesn't operate

Trash Racks:

1. Racks are operational.
2. No debris.

Trash Raking Equipment:

1. Bearings and gear boxes were underwater and should be rebuilt.

Trash Rakes: N/A

Discharge Pipe Flap Gates:

1. West pump flap gate is damaged and not operational. The west gates must be removed and repaired.

Pump Station Building Structure:

1. The building structure, which is concrete, steel and brick structure, is in good condition. The upper level was not covered with water. No visible damage due to Hurricane Katrina, except for the wall sidings. Sections of wall panels where damaged on the West, East and South walls. The entire wall siding on the North wall was damaged.
2. Siding girt (C8) are rusted all around the building.
3. Fence (10' x 6' high) piece on the East side was damaged. And one post at the North side was damaged.
4. The diesel fuel tanks where covered with water and the fuel got contaminated in the tanks. The parish has cleaned the tanks since then and placed a water separator.
5. Workshop was underwater, but no visible structural damage. Work table is made of wood, and also was under water for several days, but no obvious damage was visible.
6. Trash screens where covered with water. No visible damage to the concrete structure or the screens. Some visible rusted element of the screen. Work was done to the motors by the parish by replacing the 3 motors.

Pump Station Building Roof:

1. The steel roof structure is in good condition with signs of skin rust. Some roof panels at the North-West corners are missing.
2. Roof gutters on 4 corners are damaged and missing.

Pump Station Building Doors & Windows:

1. Workshop door has been underwater and needs maintenance.
2. Building windows and doors on the upper level where not under water. They are in good condition.

Pump Station Mechanical Building Systems: [Mechanical Ventilation (Louvers & Fans)]:

The equipment is functional.

Pump Station Electrical Bldg. Systems: Building Power, Panelboard. Lights, Communications):

The following items went under water:

1. 7500W forced-air heater
2. Controller for compressed air dryer motor

3. Much of the electrical conduit run from the building to the intake area
4. Three sets of on/off switches and duplex receptacles
5. Exterior telephone jack

Other:

1. West muffler exhaust pipe has been damaged and missing. A new muffler is needed.
2. Access road damaged at the end of the crossing canal bridge. Approx. (10’ wide x 50’ long) gravel road.

PUMP STATION INSPECTION REPORT

Name of Flood Control Works (Federal/Non-Federal):
St. Bernard Parish – MERAUX Pump Station No. 4

Date/Hour Inspection Began/Ended:
Date: 11-2-05 Time: 12:30 PM

Inspectors:
Corps Representatives:

Drainage District Officials:

River/Forebay Elevations:
River El.: _____ Stage El.: _____ Zero Gage El.: _____
Forebay El.: +0.5' Stage El.: _____ Zero Gage El.: _____

General Comments:

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
SECTION I				***FOR USE DURING INITIAL ELIGIBILITY INSPECTION ONLY***	
1. Total Capacity	X			Record Total Pump Station Capacity.	1114 cfs capacity
SECTION II				***FOR USE DURING ALL PUMP STATION INSPECTIONS***	
2. Pump Station Building		X		A The Pump Station building is in good structural condition. No apparent major cracks in concrete, no subsidence, roof is not leaking, Intake louvers clean, clear of debris. Exhaust fans operational and maintained. Lights operational. Safe working environment. M Spalling and cracking are present, or minimal subsidence is evident, or roof leaks, or other conditions are present that need repair but do not threaten the structural integrity or stability of the building. U Any condition that does not meet at least Minimum Acceptable standard.	List Damages: 1. The building structure, which is concrete, steel and brick structure, is in good condition. The upper level was not covered with water. No visible damage due to Hurricane Katrina, except for the wall sidings. ***See Photo 66*** 2. North wall siding is missing (15' high x 67' wide). ***See Photo 67*** 3. South wall siding is missing at west end (15' high x 30' wide). ***See Photos 68 & 69*** 4. South wall siding is missing at east end (15' high x 3' wide). ***See Photos 68 & 69*** 5. East wall siding is missing (5' high x 60' wide). ***See Photo 70*** 6. West wall siding is missing (5' high x 60' wide). ***See Photo 71*** 7. The steel roof structure is in good condition with signs of skin rust. Some roof panels at the North-West corners are missing (10' x 20'). ***See Photos 72 & 73*** 8. Roof gutters on 4 corners are damaged and missing. Need new gutters. ***See Photo 74*** 9. Siding girt (C8) are rusted all around the building (194 liner feet) and need replacement. 10. Fence (10' x 6' high) piece on the East side was damaged. And one post at the North side was damaged. 11. Trash screens where covered with water. No visible damage to the concrete structure or the screens. Some visible rusted element of the screen. 12. Access road; Repair (10' wide x 50' long) gravel road. ***See Photo 75***

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
3. Pumps		X		A All pumps are fully operational. M All pumps are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next period of usage. U One or more primary pumps are not operational, or noted discrepancies have not been corrected.	List Major Problems/Damage: 1. Condition of pump no 2, the electric drive pump is unknown.
4. Motors		X		A All items are fully operational. M All systems are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next expected period of usage. U One or more primary motors are not operational, or noted discrepancies have period of usage.	List Major Problems/Damage: 1. Condition of drive motor is unknown since there is no power.
5. Engines		X		A All items are fully operational. M All systems are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next expected period of usage. U One or more primary motors are not operational, or noted discrepancies have period of usage.	List Major Problems/Damage: 1. Some minor instrumentation problems need to be repaired.

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
6. Gear Reducers	X			A All items are fully operational. M All systems are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next expected period of usage. U One or more primary motors are not operational, or noted discrepancies have period of usage.	List Major Problems/Damage:
7. Sumps/Trash Racks/Trash Rakes		X		A Sumps/Trash Racks are free of concrete deterioration, protected from Permanent damage by corrosion and free of floating and sunken debris. Sumps are clear of Accumulated silt. Passing debris is minimized by spacing of trash rack bars. Trash rakes as applicable are fully operational. M Trash racks and sumps have some accumulated silt or debris but are not currently inhibiting the pump(s) performance. No periodic maintenance has been performed. Present condition could be expected to perform through the next expected period of usage provided removal of floating debris is accomplished. U Proper operation can not be ensured through the next period of usage. Possible damage could result to the pumping equipment with continued operation.	List Damage: 1. Trash racks are in serviceable condition, but need to be inspected for damage from salt water. ***See Photo 76*** 2. Much of the electrical conduit run from the building to the intake area was submerged.
8. Other Metallic Items				A All metal parts in plant/building show no signs of corrosion. M Corrosion on metallic parts (except equipment anchors) and deterioration period of usage. U Any condition that does not meet at least Minimum Acceptable standards.	List Damage:

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
9. Ancillary Equipment i.e. Compressed Air Siphon Breakers Fuel Supply Vacuum Priming Pump Lubrication Heating/Ventilation Engine Cooling Engine Oil Filtering		X		A All equipment is fully operational. M Ancillary equipment is operational and deficiencies/minor discrepancies are such that equipment could be expected to perform through the next period of usage. U One or more of the equipment systems is inoperable. The present condition of the inoperable equipment could reduce the efficiency of the pump station or jeopardize the pump station's role in flood protection.	List Damage: 1) Fuel tanks were contaminated with salt water and cleaned. They should be inspected and chemically cleaned if corroded internally. ***See Photo 77*** 2) The following items went under water: a) Electromode heater (7500W). ***See Photo 78*** b) Controller for compressed air dryer motor (1/4HP). ***See Photo 79***
10. Backup Ancillary Equipment (e.g. Standby Generator)			X	A Adequate, reliable, and enough capacity to meet demands. Backup units/equipment are properly sized, operational and in an overall well maintained condition. M Backup ancillary equipment is operational and deficiencies/minor discrepancies are such that equipment could be expected to perform through the next period of usage. U Backup ancillary equipment not considered reliable to sustain operations during flooding conditions. N/A Not Applicable if no backup equipment exists.	List Damage: 1. The backup air compressor requires repair or replacement. See Photo 80 2. Generator set (15kW, 3-Phase, 240 Volt) as reported, is not functioning. The station operator indicated that the fuses in the gray generator control box blow shortly after engine is started.
11. Pump Control System		X		A Operational and maintained free of damage, corrosion, or other debris. M Operational with minor discrepancies. U Not operational, or uncorrected discrepancies	List Damage: 1. Pyrometers, air switching valves, and water level gauges need repair or replacement. ***See Photos 81, 82 & 83***

PUMP STATION MAINTENANCE INSPECTION GUIDE

12. Intake and Discharge Outlets			X	Functional. No damaging erosion evident. Opening/closing devices for vertical gates, flap gates, etc. are functional in a well-maintained condition. (A or U.)	List Damage: 1. West and East Discharge gate is inoperable and West gate is permanently open. ***See Photos 84, 85 & 86***
13. Wire Insulation and Splices (For pump stations with Electric pumps only)				A Visual inspection identifies that cable jackets and insulation have good integrity. Visual inspection identifies that splices and watertight seals have good integrity. M Visual inspection identifies that cable jackets and insulation may have damage and their reliability is suspect. Visual inspection identifies splices and watertight seals may have damage and their reliability is suspect. U Cable Jackets, Splices, and Watertight Seals are identified to have damage.	List Damage:
14. Final Remarks:					

GENERAL INSTRUCTIONS

1. All items on this guide must be addressed and a rating given.
2. The lowest single rating given will determine the overall rating for the pump station.
3. Additional areas for inspection will be incorporated by the inspector into this guide if the layout or physical characteristics of the pump station warrant this. Appropriate entries will be made in the REMARKS block.
4. Rating Codes:
   A - Acceptable
   M - Minimally Acceptable
   U - Unacceptable

The cost estimate information contained on this page is proprietary to the Government and can not be posted on the public website at this time.

E.J. GORE PUMPING STATION #5

Name : E. J. Gore Pumping Station #5
Parish : St. Bernard
Address: 7701 East Judge Perez Dr. Violet, La. 70085
Phone Numbers : 504-682-8235
Station Manager : Westley Bracamontes (beeper # 504-547-4216)
Position : Latitude 29:57:41.8 Longitude –89:57:52.2
Pump From : Florida Walk Forty Arpent Canal
Pump To: Wetlands To Rear Of Station and Bayou Dupre

Facility Floor Elevation: 2’ (N.G.V.D.)

Capacity (gpm)

Pump1 = 50,000 gpm
Pump2 = 50,000 gpm
Pump3 = 50,000 gpm
Pump4 = 50,000 gpm
Pump5 = 50,000 gpm
Pump6 = 50,000 gpm

Pump Station Condition and Potential for Flood Proofing Checklist

E.J. GORE PUMPING STATION #5

Name : E. J. Gore Pumping Station #5
Parish : St. Bernard
Address: 7701 East Judge Perez Dr. Violet, La. 70085
Phone Numbers : 504-682-8235
Station Manager : Westley Bracamontes (beeper # 504-547-4216)
Position : Latitude 29:57:41.8 Longitude –89:57:52.2
Pump From : Florida Walk Forty Arpent Canal
Pump To: Wetlands To Rear Of Station and Bayou Dupre

Facility Floor Elevation: 2' (N.G.V.D.)

Capacity (gpm)

Pump1 = 50,000 gpm
Pump2 = 50,000 gpm
Pump3 = 50,000 gpm
Pump4 = 50,000 gpm
Pump5 = 50,000 gpm
Pump6 = 50,000 gpm

2. Ever flooded?
   Yes

3. Flood watermark height above building floor
   6 feet.

4.. Building Walls
   a. Wall construction material (i.e. brick, concrete, metal)
      CMU walls with steel rigid frame supporting bridge crane rail and metal roof.
   b. Height of non-porous material above building floor(i.e. brick, concrete, sealable metal)
      Approximately 17 feet.

5. Floor
   a. Material (i.e. concrete)
      Concrete
   b. Condition (i.e. cracked, porous, non-porous)
      Good, non-porous.
   c. Floor drains (i.e. can be blocked to prevent backflow)
      n/a
   d. Sump pit to pump water from pump & driver area

n/a

6. Roof
    a. Material (i.e. metal)
        Metal
    b. Condition (i.e. intact, damaged, repair schedule)
        Three of four roof vents with obvious damage, probable damage to roof insulation from roof leaks, most of eave damaged.

7. Pumps
    a. Capacity of each pump, cfs
        All six pumps – 111 cfs.
    b. Driver for each pump (i.e. electric motor, diesel motor, diesel motor/generator/electric motor combination)
        Pump 1 – Dual powered hydraulic system (selectable, either electric or diesel)
        Pumps 2 through 6 – Diesel motor powered hydraulic system.
    c. Condition of each pump/motor combination
        i. Operating
            Hydraulic driven pumps may be damaged due to having been submerged. Electric motor and diesel engines are probably damaged due to having been submerged.
        ii. Needs scheduled repairs (identify)
            n/a
        iii. Inoperable - identify repair needs
            see (i)
        iv. Identify repair schedule if possible
            Unknown.

8. Overall condition of pump station facility
    a. Access (i.e. roads blocked by debris, roads clear,)
        access is ok, roads clear.
    b. Site (i.e. debris on grounds, mud inside building, cleaned)
        Very little debris on grounds, mud in toilet/shower room.
    c. Type and status of Corps work (i.e. debris removal - complete)
        n/a
    d. Type and status of work by others (i.e. GE - drying motors - 50% complete)
        n/a
9. Power source
    a. Power lines (i.e. down, up and functioning, underground, repair schedule)
        Utility company power not working, no schedule for resumption of service yet.
    b. Transformers (i.e. above flood level, flooded, repair schedule)
        Location intact on pole, not known if functional since there is no service to transformer yet.
    c. Backup power (i.e. none, diesel/electric generator)
        Generator for station power and lights is inoperable. Diesel engines startup by battery power.

d. Potential to elevate primary and backup power source above flood level

Possible.

10. Operator hurricane protection

a. "Safe haven" for operators (i.e. bunker style non-flooding protection during floods)

no

b. Life support (i.e. potable water, toilets, showers, food)

no

c. Can facility be operated from bunker?

no

Pump Station Observation Sheet

Name of Pump Station and/or Pump Station No. – E. J. GORE PUMPING STATION No. 5

Parish (drainage basin) where pump station is located: **St. Bernard Parish**

A. Number of Pumps – 6 Pumps

Pump Info (Circle the appropriate answer) The pumps may be operable and still be damaged. What about submersed equipment if any such as impellers? Pump capacity gpm (or cfs), Hp, Voltage, Cycles (Hz), discharge size, horizontal or vertical

Pump No. 1: Drive Type - (Diesel Engine) Electric Motor Operable - Yes (No)

Remarks –

1. Recommend pumps not be operated until completely rebuilt.
2. Electric motor (200HP) and its controller had gone under water.
   Rated voltage: 460V Rated current: 219A
   Frame: 445TSC 1780 RPM
   NEMA Design: B NEMA Insulation: B NEMA Code: G
   Service Factor: 1.15 Time Rating: Cont
   Dripproof Maximum Ambient Temperature: 40 Degrees C

Pump No. 2: Drive Type - (Diesel Engine) Electric Motor Operable - Yes (No)

Remarks –

1. Recommend pumps not be operated until completely rebuilt

Pump No. 3: Drive Type - (Diesel Engine) Electric Motor Operable - Yes (No)

Remarks –

1. Recommend pumps not be operated until completely rebuilt

Pump No. 4: Drive Type - (Diesel Engine) Electric Motor Operable - Yes (No)

Remarks –

1. Recommend pumps not be operated until completely rebuilt

Pump No. 5: Drive Type - (Diesel Engine) Electric Motor Operable - Yes (No)

Remarks –

1. Recommend pumps not be operated until completely rebuilt

Pump No. 6: Drive Type - (Diesel Engine) Electric Motor Operable - Yes (No)

Remarks –

1. Recommend pumps not be operated until completely rebuilt

B. Auxiliary Equipment and Features (note damage and problems):

Incoming Electric Power Service:

1. No city power at time of inspection. Technicians were working on restoring power.

Standby Backup Power Equipment:

1. The generator set (15kW) had been submerged.

Switchgear and/or Motor Control Centers:

1. n/a

Motor Feeder Power Cables and wiring: (motor cables and splice seals):

1. Cables were submerged.

Pump Controls Systems:

1. All controls flooded.

Fuel Systems and Supply:

1. Storage tank was not flooded. Lines from tank to engines needs to be chemically cleaned if it was contaminated

Compressed Air System:

1. None required.

Trash Racks:

1. Rusted and some damage not related to Hurricane, in need of extensive repair.
2. No debris.
3. Concrete walkway supported by timber piles is in good condition.

Trash Raking Equipment:

1. None.

Trash Rakes: None.

Discharge Pipe Flap Gates:

1. Flap gates are intact but rusted.
2. Concrete slope paving at discharge pipes are broken. They are located left of pipe #1, between pipe #1 & 2, and right of pipe #6.

Pump Station Building Structure:

1. The building structure, which is concrete block wall with steel frame roofing and insulted roof. The building (30' wide x 60' long x 25' high) was flooded with 10' of water.
2. Bathroom was flooded. The shower stand and sink were damaged.
3. Office (12' x 12' x 10' high) was flooded. Wooden wall panels with insulations are damaged as well as the rest room; sink, stool and wash basin are damaged.
4. A/C wall unit is damaged.
5. Protection riprap north of the building has been eroded.

Pump Station Building Roof:

1. The roof structure seems in good condition.
2. Roof flashing is damaged at the North side of building.
3. Roof insulation looks intact but may have some damage due to roof leaks
4. 3 or 4 roof vents are damaged, even though only one of the vents penetrates the roof to the inside of the building.

Pump Station Building Doors & Windows:

1. The East rollup door is damaged (10' wide x 12' high).

Pump Station Mechanical Building Systems: [Mechanical Ventilation (Louvers & Fans)]:

Gravity ventilation.

Pump Station Electrical Bldg. Systems: Building Power, Panelboard. Lights, Communications):

1. VHF radio and antenna were damaged.
2. Panelboard, switches, receptacles, and conduit were being replaced and rewired by a contractor.
3. Utility had not yet gotten power back to the transformers that serve the facility.

Other:

1. None.

PUMP STATION INSPECTION REPORT

Name of Flood Control Works (Federal/Non-Federal):
St. Bernard Parish – E. J. GORE Pump Station No. 5

Date/Hour Inspection Began/Ended:
Date: 11-2-05 Time: 1:45 PM

Inspectors:
Corps Representatives:

Drainage District Officials:

River/Forebay Elevations:
River El.: _____ Stage El.: _____ Zero Gage El.: _____
Forebay El.: +0.5' Stage El.: _____ Zero Gage El.: _____

General Comments:

1. A contractor had replaced the 30kVA distribution transformer inside the facility. He had also replaced the facility's panelboard and was rewiring it. In addition, he was replacing other electrical items that had been submerged such as switches, receptacles, and conduit.

2. Three of the 6 Pumps have been run. One engine has a knock. Extensive overhaul and repair required.

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
SECTION I				***FOR USE DURING INITIAL ELIGIBILITY INSPECTION ONLY***	
1. Total Capacity				Record Total Pump Station Capacity.	
SECTION II				***FOR USE DURING ALL PUMP STATION INSPECTIONS***	
2. Pump Station Building			X	A The Pump Station building is in good structural condition. No apparent major cracks in concrete, no subsidence, roof is not leaking, Intake louvers clean, clear of debris. Exhaust fans operational and maintained. Lights operational. Safe working environment. M Spalling and cracking are present, or minimal subsidence is evident, or roof leaks, or other conditions are present that need repair but do not threaten the structural integrity or stability of the building. U Any condition that does not meet at least Minimum Acceptable standard.	List Damages: 1. The building structure, which is concrete block wall with steel frame roofing and insulted roof. The building (30' wide x 60' long x 25' high) was flooded with 10' of water. ***See Photo 87*** 2. The East rollup door is damaged (10' wide x 12' high). ***See Photo 88*** 3. Bathroom was flooded. The shower stand and sink were damaged***. See Photo 89 & 90*** 4. Office (12' x 12' x 10' high) was flooded. Wooden wall panels with insulations are damaged as well as the rest room; sink, stool and wash basin are damaged. ***See Photos 91, 92, 93 & 94*** 5. A/C wall unit is damaged. ***See Photo 95*** 6. Protection riprap north of the building has been eroded. ***See Photos 96 & 97*** 7. Roof flashing is damaged at the North side of building. ***See Photo 98*** 8. Roof insulation looks intact but may have some damage due to roof leaks. ***See Photo 99*** 9. 4 roof vents are damage, even though only one of the vents penetrates the roof to the inside of the building. ***See Photo 100*** 10. Concrete slope paving at discharge pipes are broken. They are located left of pipe #1, between pipe #1 & 2, and right of pipe #6***. See Photos 101 & 102*** 11. VHF radio and antenna. ***See Photo 103***

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
3. Pumps				A All pumps are fully operational. M All pumps are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next period of usage. U One or more primary pumps are not operational, or noted discrepancies have not been corrected.	List Major Problems/Damage:
4. Motors			X	A All items are fully operational. M All systems are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next expected period of usage. U One or more primary motors are not operational, or noted discrepancies have period of usage.	List Major Problems/Damage: 1. Electric pump motor (200HP) and its controller went under water.
5. Engines			X	A All items are fully operational. M All systems are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next expected period of usage. U One or more primary motors are not operational, or noted discrepancies have period of usage.	List Major Problems/Damage: 1. The engines were submerged in salt water and should be completely rebuilt unless needed for an emergency. ***See Photos 104, 105 & 106***

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
6. Gear Reducers				A All items are fully operational. M All systems are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next expected period of usage. U One or more primary motors are not operational, or noted discrepancies have period of usage.	List Major Problems/Damage:
7. Sumps/Trash Racks/Trash Rakes		X		A Sumps/Trash Racks are free of concrete deterioration, protected from Permanent damage by corrosion and free of floating and sunken debris. Sumps are clear of Accumulated silt. Passing debris is minimized by spacing of trash rack bars. Trash rakes as applicable are fully operational. M Trash racks and sumps have some accumulated silt or debris but are not currently inhibiting the pump(s) performance. No periodic maintenance has been performed. Present condition could be expected to perform through the next expected period of usage provided removal of floating debris is accomplished. U Proper operation can not be ensured through the next period of usage. Possible damage could result to the pumping equipment with continued operation.	List Damage: 1. Trash racks are in serviceable condition, but need to be repaired to replace damaged and missing bars.
8. Other Metallic Items				A All metal parts in plant/building show no signs of corrosion. M Corrosion on metallic parts (except equipment anchors) and deterioration period of usage. U Any condition that does not meet at least Minimum Acceptable standards.	List Damage:

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
9. Ancillary Equipment i.e. Compressed Air Siphon Breakers Fuel Supply Vacuum Priming Pump Lubrication Heating/Ventilation Engine Cooling Engine Oil Filtering			X	A All equipment is fully operational. M Ancillary equipment is operational and deficiencies/minor discrepancies are such that equipment could be expected to perform through the next period of usage. U One or more of the equipment systems is inoperable. The present condition of the inoperable equipment could reduce the efficiency of the pump station or jeopardize the pump station's role in flood protection.	List Damage: 1. Generator set (30kW, 3-Phase, 240 Volt) went under water. ***See Photos 107, 108 & 109*** 2. Fuel lines may be contaminated with salt water. Hydraulic oil tank is not on its foundation and probably contaminated with salt water.
10. Backup Ancillary Equipment (e.g. Standby Generator)			X	A Adequate, reliable, and enough capacity to meet demands. Backup units/equipment are properly sized, operational and in an overall well maintained condition. M Backup ancillary equipment is operational and deficiencies/minor discrepancies are such that equipment could be expected to perform through the next period of usage. U Backup ancillary equipment not considered reliable to sustain operations during flooding conditions. N/A Not Applicable if no backup equipment exists.	List Damage: 1. The backup generator requires repair or replacement. ***See Photo 109***
11. Pump Control System		X		A Operational and maintained free of damage, corrosion, or other debris. M Operational with minor discrepancies. U Not operational, or uncorrected discrepancies	List Damage: 1. Control system was contaminated with salt water and should only be used in an emergency. ***See Photo 110***

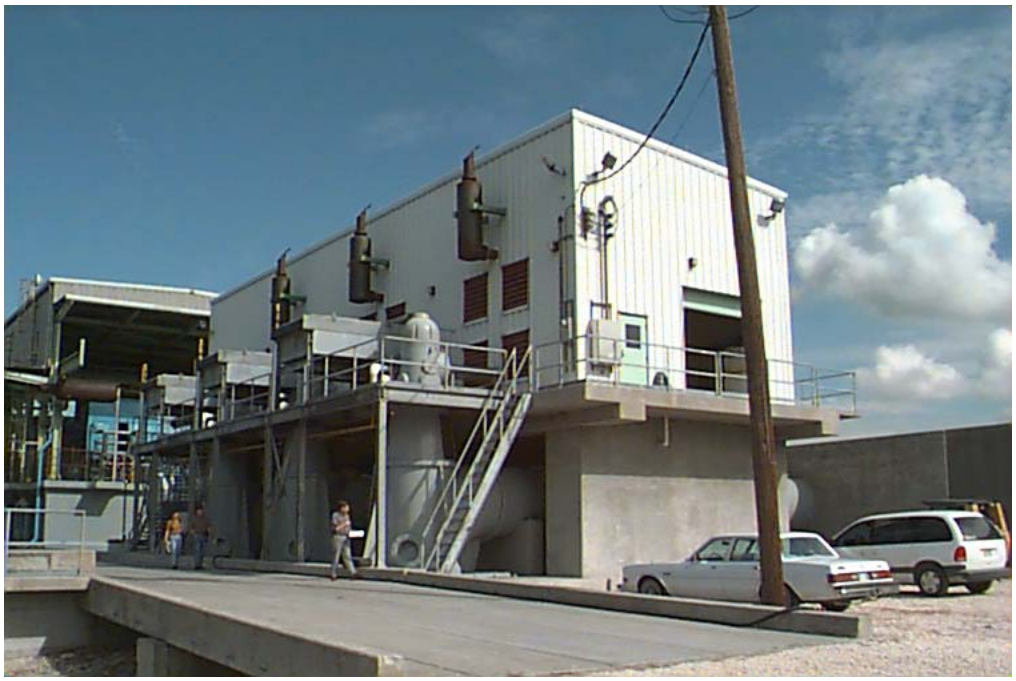
PUMP STATION MAINTENANCE INSPECTION GUIDE

12. Intake and Discharge Outlets	X			Functional. No damaging erosion evident. Opening/closing devices for vertical gates, flap gates, etc. are functional in a well-maintained condition. (A or U.)	List Damage:
13. Wire Insulation and Splices (For pump stations with Electric pumps only)			X	A Visual inspection identifies that cable jackets and insulation have good integrity. Visual inspection identifies that splices and watertight seals have good integrity. M Visual inspection identifies that cable jackets and insulation may have damage and their reliability is suspect. Visual inspection identifies splices and watertight seals may have damage and their reliability is suspect. U Cable Jackets, Splices, and Watertight Seals are identified to have damage.	List Damage: 1. Cables were submerged.

14. Final Remarks:
    1. In order to meet the project schedule a concept such as building a separate operator building, elevate the engines, replace the existing engine and pump with a highspeed diesel and hydraulic pump, and enclose the engines for weather protection needs to be considered.

GENERAL INSTRUCTIONS	1. All items on this guide must be addressed and a rating given. 2. The lowest single rating given will determine the overall rating for the pump station. 3. Additional areas for inspection will be incorporated by the inspector into this guide if the layout or physical characteristics of the pump station warrant this. Appropriate entries will be made in the REMARKS block. 4. Rating Codes: A - Acceptable M - Minimally Acceptable U - Unacceptable

The cost estimate information contained on this page is proprietary to the Government and can not be posted on the public website at this time.



JEAN LAFITTE PUMPING STATION #6

Name : Jean Lafitte Pumping Station #6
Parish : St. Bernard
Address : 4200 A Jean Lafitte Pkwy., Chalmette La. 70043
Phone Numbers : 504-279-3642
Station Manager : Westley Bracamontes (beeper # 504-547-4216)
Position : Latitude 29:57:58.4 Longitude –89:58:29.5
Pump From : Florida Walk Forty Arpent Canal
Pump To: Wetlands To Rear Of Station and Bayou Bienvenue

Facility Floor Elevation: 16 ft. (N.G.V.D.)

Capacity (gpm)

Pump 1 = 150,000 gpm
Pump 2 = 150,000 gpm
Pump 3 =150,000 gpm

Pump Station Condition and Potential for Flood Proofing Checklist

JEAN LAFITTE PUMPING STATION #6

Name : Jean Lafitte Pumping Station #6
Parish : St. Bernard
Address : 4200 A Jean Lafitte Pkwy., Chalmette La. 70043
Phone Numbers : 504-279-3642
Station Manager : Westley Bracamontes (beeper # 504-547-4216)
Position : Latitude 29:57:58.4 Longitude –89:58:29.5
Pump From : Florida Walk Forty Arpent Canal
Pump To: Wetlands To Rear Of Station and Bayou Bienvenue

Facility Floor Elevation: 16 ft. (N.G.V.D.)

Capacity (gpm)

Pump 1 = 150,000 gpm
Pump 2 = 150,000 gpm
Pump 3 =150,000 gpm

2. Ever flooded?
   Only on lower level up to about 1 to 2 ft from bottom of concrete of upper level. Water level did not reach operating floor.

3. Flood watermark height above building floor
   n/a

4.. Building Walls
   a. Wall construction material (i.e. brick, concrete, metal)
      Reinforced concrete walls – lower level fuel tank containment areas.
      Rigid frame metal building – pump and control room area.
   b. Height of non-porous material above building floor(i.e. brick, concrete, sealable metal)
      Approximately 25 feet.

5. Floor
   a. Material (i.e. concrete)
      Concrete
   b. Condition (i.e. cracked, porous, non-porous)
      Good, non-porous.
   c. Floor drains (i.e. can be blocked to prevent backflow)
      n/a
   d. Sump pit to pump water from pump & driver area
      n/a

6. Roof
    a. Material (i.e. metal)
        Metal
    b. Condition (i.e. intact, damaged, repair schedule)
        Approximately 5' x 15' area of roofing is damaged.. Additional numerous leaks over the entire extent of the roof were reported by station operator.

7. Pumps
    a. Capacity of each pump, cfs
        Pumps 1, 2, & 3 – 334 cfs each

    b. Driver for each pump (i.e. electric motor, diesel motor, diesel motor/generator/electric motor combination)
        Pumps 1, 2, & 3 – all 3 are diesel motor driven

    c. Condition of each pump/motor combination
        i. Operating
            All three were operational
        ii. Needs scheduled repairs (identify)
            n/a
        iii. Inoperable - identify repair needs
            n/a
        iv. Identify repair schedule if possible
            n/a

8. Overall condition of pump station facility
    a. Access (i.e. roads blocked by debris, roads clear,)
        access is ok, roads clear.
    b. Site (i.e. debris on grounds, mud inside building, cleaned)
        some debris on grounds, some mud still inside of lower level.
    c. Type and status of Corps work (i.e. debris removal - complete)
        n/a
    d. Type and status of work by others (i.e. GE - drying motors - 50% complete)
        n/a
9. Power source
    a. Power lines (i.e. down, up and functioning, underground, repair schedule)
        up and functioning
    b. Transformers (i.e. above flood level, flooded, repair schedule)
        up and running
    c. Backup power (i.e. none, diesel/electric generator)
        diesel/electric generator operational and capable of running all power at station.
    d. Potential to elevate primary and backup power source above flood level
        n/a – was not flooded.

10. Operator hurricane protection

a. "Safe haven" for operators (i.e. bunker style non-flooding protection during floods)
no
b. Life support (i.e. potable water, toilets, showers, food)
yes
c. Can facility be operated from bunker?
no

Pump Station Observation Sheet

Name of Pump Station and/or Pump Station No. – JEAN LAFITTE PUMPING STATION No. 6

Parish (drainage basin) where pump station is located: **St. Bernard Parish**

A. Number of Pumps – 3 Pumps

Pump Info (Circle the appropriate answer) The pumps may be operable and still be damaged. What about submersed equipment if any such as impellers? Pump capacity gpm (or cfs), Hp, Voltage, Cycles (Hz), discharge size, horizontal or vertical

Pump No. 1: Drive Type - (Diesel Engine) Electric Motor Operable - (Yes) No

Remarks –

1. Exhaust discharge covers require repair and insulation needs repair

Pump No. 2: Drive Type - (Diesel Engine) Electric Motor Operable - (Yes) No

Remarks –

1. Exhaust discharge covers require repair and insulation needs repair

Pump No. 3: Drive Type - (Diesel Engine) Electric Motor Operable - (Yes) No

Remarks –

1. Exhaust discharge covers require repair and insulation needs repair

B. Auxiliary Equipment and Features (note damage and problems):

Incoming Electric Power Service:

1. Utility power has been restored.

Standby Backup Power Equipment:

1. Operable.
2. Fan belt on generator needs to be replaced.
3. Discharge needs a deflector.

Switchgear and/or Motor Control Centers:

1. Appears in good condition.

Motor Feeder Power Cables and wiring: (motor cables and splice seals):

1. n/a

Pump Controls Systems:

1. Discharge water level transducer is missing.

Fuel Systems and Supply:

1. Storage tanks were almost flooded.

Compressed Air System:

1. None required.

Trash Racks:

1. Screens are in good condition.
2. Walkway handrail is bent at west stairs. Anchor bolts are OK.
3. Concrete walkway is chipped by (1' x 6") at west end cantilever.

Trash Raking Equipment:

1. One rake light assembly (mast Included) is gone.
2. One rake light is dangling from where the two pieces of the mast connect.
3. Rake gear boxes need to be inspected and repaired.
4. Chain drive covers need to be cleaned and oil replaced

Trash Rakes: n/a

Discharge Pipe Flap Gates:

1. n/a

Pump Station Building Structure:

1. No signs of damage to the building exterior.
2. Concrete walkway and handrails around the building are in good condition.
3. No damage to the concrete basement under the building.
4. No damage to the discharge pipe supports.
5. No damage to the radiators' steel platform, handrails and gratings.

Pump Station Building Roof:

1. North West corner of the roof panel is damaged with series of holes penetrate the panel.
2. Roof panel tie down screws are missing in few areas.
3. North wall roof gutter running along the length of the building is bent.

Pump Station Building Doors & Windows:

1. No door or windows are damaged.

Pump Station Mechanical Building Systems: [Mechanical Ventilation (Louvers & Fans)]:

1. No problems observed.

Pump Station Electrical Bldg. Systems: Building Power, Panelboard. Lights, Communications):

1. Much of electrical conduit running from building to intake area was submerged.
2. Eight lighting fixtures on the lower level took water.
3. Remote engine alarm panel (Rochester Instrument Systems Model Number AN-3196A) does not function.

4. Lightning rod is no longer properly secured at roof.
5. Center exterior floodlight is not working.
6. Sewage aerator motor and timer went under water.
7. Water leaked into fluorescent lights (QTY 4) in office.
8. Water leaked into light/heater/vent in restroom.
9. Light over office door does not illuminate
10. Breaker No. 1 (20A?) in panelboard trips intermittently.
11. One on/off switch and one duplex receptacle were submerged

Other:

1. Exhaust pipe insulations are cracked and chipped off.
2. Muffler pipe flaps are broken and missing.

PUMP STATION INSPECTION REPORT

Name of Flood Control Works (Federal/Non-Federal):
St. Bernard Parish – JEAN LAFITTE Pump Station No. 6

Date/Hour Inspection Began/Ended:
Date: 11-2-05 Time: 8:30 AM

Inspectors:
Corps Representatives:

Drainage District Officials:

River/Forebay Elevations:
River El.: _____ Stage El.: _____ Zero Gage El.: _____
Forebay El.: +1.5' Stage El.: _____ Zero Gage El.: _____

General Comments:

1. This station is operational except for a few minor items

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
SECTION I				***FOR USE DURING INITIAL ELIGIBILITY INSPECTION ONLY***	
1. Total Capacity	X			Record Total Pump Station Capacity.	1000 cfs
SECTION II				***FOR USE DURING ALL PUMP STATION INSPECTIONS***	
2. Pump Station Building		X		A The Pump Station building is in good structural condition. No apparent major cracks in concrete, no subsidence, roof is not leaking, Intake louvers clean, clear of debris. Exhaust fans operational and maintained. Lights operational. Safe working environment. M Spalling and cracking are present, or minimal subsidence is evident, or roof leaks, or other conditions are present that need repair but do not threaten the structural integrity or stability of the building. U Any condition that does not meet at least Minimum Acceptable standard.	List Damages: 1. North West corner of the roof panel is damaged with series of holes penetrate the panel. (5' x 15') roof panel need to be replaced. ***See Photos 111 & 112*** 2. Roof panel tie down screws are missing in few areas. Approx. 24 screws. ***See Photos 111 & 112*** 3. Walkway handrail is bent at west stairs. ***See Photo 113*** 4. Concrete walkway is chipped by (1' x 6") at west end cantilever. ***See Photos 114, 115 & 116*** 5. Eight lighting fixtures on the lower level took water. 6. Lightning rod is no longer properly secured at roof. ***See Photo 117*** 7. Center exterior floodlight is not working. ***See Photo 117*** 8. Sewage aerator motor and timer went under water. ***See Photo 118*** 9. Water leaked into fluorescent lights (QTY 4) in office. 10. Water leaked into light/heater/vent fixture in restroom. 11. Light over office door does not illuminate. 12. Breaker No. 1 (20A?) in panelboard trips intermittently. 13. One on/off switch and one duplex receptacle were submerged. 14. Exterior telephone jack went under water.

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
3. Pumps	X			A All pumps are fully operational. M All pumps are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next period of usage. U One or more primary pumps are not operational, or noted discrepancies have not been corrected.	List Major Problems/Damage:
4. Motors	X			A All items are fully operational. M All systems are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next expected period of usage. U One or more primary motors are not operational, or noted discrepancies have period of usage.	List Major Problems/Damage:
5. Engines	X			A All items are fully operational. M All systems are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next expected period of usage. U One or more primary motors are not operational, or noted discrepancies have period of usage.	List Major Problems/Damage: 1. Remote engine alarm panel (Rochester Instrument Systems Model Number AN-3196A) does not function. ***See Photos 119 & 120*** 2. Exhaust flappers weights and cover plates are missing and insulation on exhaust lines is cracking. ***See Photo 121***

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
6. Gear Reducers	X			A All items are fully operational. M All systems are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next expected period of usage. U One or more primary motors are not operational, or noted discrepancies have period of usage.	List Major Problems/Damage:
7. Sumps/Trash Racks/Trash Rakes		X		A Sumps/Trash Racks are free of concrete deterioration, protected from Permanent damage by corrosion and free of floating and sunken debris. Sumps are clear of Accumulated silt. Passing debris is minimized by spacing of trash rack bars. Trash rakes as applicable are fully operational. M Trash racks and sumps have some accumulated silt or debris but are not currently inhibiting the pump(s) performance. No periodic maintenance has been performed. Present condition could be expected to perform through the next expected period of usage provided removal of floating debris is accomplished. U Proper operation can not be ensured through the next period of usage. Possible damage could result to the pumping equipment with continued operation.	List Damage: 1. Much of electrical conduit running from building to intake area was submerged. 2. One rake light assembly (mast Included) is gone. See ***Photos 122 & 123*** 3. One rake light is dangling from where the two pieces of the mast connect. 4. Trash racks are in serviceable condition, but the gear boxes need to be inspected to determine if bearings and gears need to be repaired. The chain drive covers were filled with salt water and need to be removed, cleaned and refilled with lubricant. ***See Photo 124***
8. Other Metallic Items	X			A All metal parts in plant/building show no signs of corrosion. M Corrosion on metallic parts (except equipment anchors) and deterioration period of usage. U Any condition that does not meet at least Minimum Acceptable standards.	List Damage:

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
9. Ancillary Equipment i.e. Compressed Air Siphon Breakers Fuel Supply Vacuum Priming Pump Lubrication Heating/Ventilation Engine Cooling Engine Oil Filtering		X		A All equipment is fully operational. M Ancillary equipment is operational and deficiencies/minor discrepancies are such that equipment could be expected to perform through the next period of usage. U One or more of the equipment systems is inoperable. The present condition of the inoperable equipment could reduce the efficiency of the pump station or jeopardize the pump station's role in flood protection.	List Damage: 1. Level gauges in rear is broken and needs repair. Front end loader was submerged in salt water and is inoperable. Fan belt on generator has failed. Generator exhaust makes cooler level unreadable.
10. Backup Ancillary Equipment (e.g. Standby Generator)	X			A Adequate, reliable, and enough capacity to meet demands. Backup units/equipment are properly sized, operational and in an overall well maintained condition. M Backup ancillary equipment is operational and deficiencies/minor discrepancies are such that equipment could be expected to perform through the next period of usage. U Backup ancillary equipment not considered reliable to sustain operations during flooding conditions. N/A Not Applicable if no backup equipment exists.	List Damage:
11. Pump Control System		X		A Operational and maintained free of damage, corrosion, or other debris. M Operational with minor discrepancies. U Not operational, or uncorrected discrepancies	List Damage: 1. Discharge water level transducer is missing. ***See Photo 125*** 2. Level gauges front and rear are inoperable.

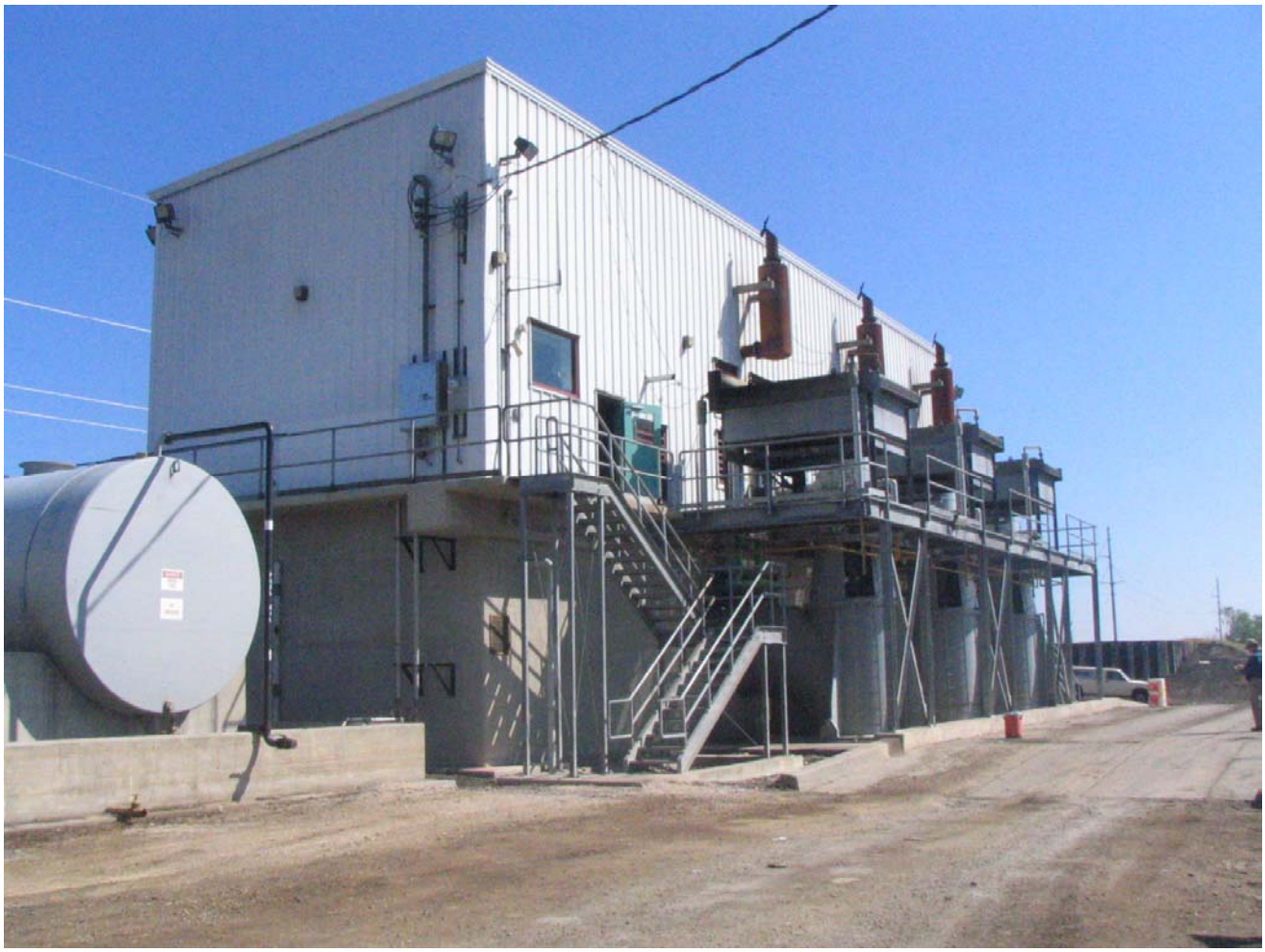
12. Intake and Discharge Outlets	X			Functional. No damaging erosion evident. Opening/closing devices for vertical gates, flap gates, etc. are functional in a well-maintained condition. (A or U.)	List Damage:
13. Wire Insulation and Splices (For pump stations with Electric pumps only)	X			A Visual inspection identifies that cable jackets and insulation have good integrity. Visual inspection identifies that splices and watertight seals have good integrity. M Visual inspection identifies that cable jackets and insulation may have damage and their reliability is suspect. Visual inspection identifies splices and watertight seals may have damage and their reliability is suspect. U Cable Jackets, Splices, and Watertight Seals are identified to have damage.	List Damage:
14. Final Remarks:					

PUMP STATION MAINTENANCE INSPECTION GUIDE

GENERAL INSTRUCTIONS

1. All items on this guide must be addressed and a rating given.
2. The lowest single rating given will determine the overall rating for the pump station.
3. Additional areas for inspection will be incorporated by the inspector into this guide if the layout or physical characteristics of the pump station warrant this. Appropriate entries will be made in the REMARKS block.
4. Rating Codes:
   A - Acceptable
   M - Minimally Acceptable
   U - Unacceptable

The cost estimate information contained on this page is proprietary to the Government and can not be posted on the public website at this time.



BAYOU DUCROS PUMPING STATION #7

Name : Bayou Ducros Pumping Station #7
Parish : St. Bernard
Address 3701 Bartolo Dr. Meraux, La. 70075
Phone Numbers : 504-277-3545
Station Manager : Westley Bracamontes (beeper # 504-547-4216)
Position : Latitude 29:57:41.8 Longitude –89:57:52.2
Pump From : Florida Walk Forty Arpent Canal
Pump To: Wetlands To Rear Of Station and Bayou Bienvenue

Facility Floor Elevation: 16 ft. (N.G.V.D.)

Capacity (gpm)

Pump1 = 150,000 gpm
Pump2 = 150,000 gpm
Pump3 = 150,000 gpm

Pump Station Observation Sheet

Name of Pump Station and/or Pump Station No. – BAYOU DUCROS PUMPING STATION No. 7

Parish (drainage basin) where pump station is located: **St. Bernard Parish**

A. Number of Pumps – 3 Pumps

Pump Info (Circle the appropriate answer) The pumps may be operable and still be damaged. What about submersed equipment if any such as impellers? Pump capacity gpm (or cfs), Hp, Voltage, Cycles (Hz), discharge size, horizontal or vertical

Pump No. 1: Drive Type - (Diesel Engine) Electric Motor Operable - (Yes) No

Remarks –

1. Exhaust discharge covers require repair and insulation needs repair.

Pump No. 2: Drive Type - (Diesel Engine) Electric Motor Operable - (Yes) No

Remarks –

1. Exhaust discharge covers require repair and insulation needs repair.

2. Radiator motor (15HP) makes squealing noise.
   Rated voltage: 230/460V Rated current: 39.2/19.5A
   Frame: 254T 1750 RPM
   NEMA Design: B NEMA Insulation: F NEMA Code: H
   Service Factor: 1.15 Time Rating: Cont
   Totally Enclosed Maximum Ambient Temperature: 40 Degrees C

Pump No. 3: Drive Type - (Diesel Engine) Electric Motor Operable - (Yes) No

Remarks –

1. Exhaust discharge covers require repair and insulation needs repair.

B. Auxiliary Equipment and Features (note damage and problems):

Incoming Electric Power Service:

1. Utility has not yet gotten power. back to the transformers that supply the facility.

Standby Backup Power Equipment:

1. Operating.

Switchgear and/or Motor Control Centers:

1. In good condition (from outside).

Motor Feeder Power Cables and wiring: (motor cables and splice seals):

1. N/A.

Pump Controls Systems:

1. Intake water level transducer is not working.

Fuel Systems and Supply:

1. ”A” day tank has small leak near hand pump.
2. Indicator boards on “A” and “B” fuel day tanks are damaged.

Compressed Air System:

1. None required.

Trash Racks:

1. Screens are in good condition.
2. Walkway handrails are in good condition. No grout under posts at the stairs.
3. Concrete walkway is in good condition.

Trash Raking Equipment:

1. Rake gear boxes need to be inspected and repaired. Chain drive covers need to be cleaned and oil replaced.

Trash Rakes: N/A

Discharge Pipe Flap Gates:

1. Unknown.

Pump Station Building Structure:

1. No signs of damage to the building exterior.
2. Concrete walkway and handrails around the building are in good condition.
3. No damage to the concrete basement under the building.
4. No damage to the discharge pipe supports.
5. No damage to the radiators’ steel platform, handrails and gratings.

Pump Station Building Roof:

1. New roof was installed by the parish after Katrina.

Pump Station Building Doors & Windows:

1. No door or windows are damaged.

Pump Station Mechanical Building Systems: [Mechanical Ventilation (Louvers & Fans)]:

1. Operational.

Pump Station Electrical Bldg. Systems: Building Power, Panelboard. Lights, Communications):

1. Much of electrical conduit running from building to intake area was submerged.
2. Eight lighting fixtures on the lower level took water.
3. Remote engine alarm panel (Rochester Instrument Systems Model Number AN-3196A) does not function.
4. Lightning rod is no longer properly secured at roof.
5. Ramp floodlight (between radiators 2 & 3) is not working.
6. Sewage aerator motor and timer went under water.
7. Water leaked into fluorescent lights (QTY 4) in office.
8. Exit lights (QTY 4) are damaged.
9. Light over office door does not illuminate
10. One engine room light is out.

11. One floodlight on the buiding wall exterior is not working.
12. One on/off switch and one duplex receptacle were submerged.
13. Exterior telephone jack went under water?

Other:

1. Scours at sheet piles behind pump station has been covered with dirt by the parish. (300’ long x 10’ wide x 3’ deep).
2. Scour section behind pump station adjacent to the west slab, has not yet been patched. (40’ long x 20’ wide x 3’ deep).
3. Scoured area under the West end stairs. (20’ x 20’ x 1’ deep)
4. The West diesel Fuel storage tank has moved 2” south. No damage to the foundations or pipes attached to tank. An angle support for the lower pipe is bent.
5. Muffler flaps are broken and missing.

Pump Station Observation Sheet

Name of Pump Station and/or Pump Station No. – BAYOU DUCROS PUMPING STATION No. 7

Parish (drainage basin) where pump station is located: **St. Bernard Parish**

A. Number of Pumps – 3 Pumps

Pump Info (Circle the appropriate answer) The pumps may be operable and still be damaged. What about submersed equipment if any such as impellers? Pump capacity gpm (or cfs), Hp, Voltage, Cycles (Hz), discharge size, horizontal or vertical

Pump No. 1: Drive Type - (Diesel Engine) Electric Motor Operable - (Yes) No

Remarks –

1. Exhaust discharge covers require repair and insulation needs repair.

Pump No. 2: Drive Type - (Diesel Engine) Electric Motor Operable - (Yes) No

Remarks –

1. Exhaust discharge covers require repair and insulation needs repair.
2. Radiator motor (15HP) makes squealing noise.

Pump No. 3: Drive Type - (Diesel Engine) Electric Motor Operable - (Yes) No

Remarks –

1. Exhaust discharge covers require repair and insulation needs repair.

B. Auxiliary Equipment and Features (note damage and problems):

Incoming Electric Power Service:

1. Utility has not yet gotten power. back to the transformers that supply the facility.

Standby Backup Power Equipment:

1. Operating.

Switchgear and/or Motor Control Centers:

1. In good condition (from outside).

Motor Feeder Power Cables and wiring: (motor cables and splice seals):

1. N/A.

Pump Controls Systems:

1. Intake water level transducer is not working.

Fuel Systems and Supply:

1. ”A” day tank has small leak near hand pump.
2. Indicator boards on “A” and “B” fuel day tanks are damaged.

Compressed Air System:

1. None required.

Trash Racks:

1. Screens are in good condition.
2. Walkway handrails are in good condition. No grout under posts at the stairs.
3. Concrete walkway is in good condition.

Trash Raking Equipment:

1. Rake gear boxes need to be inspected and repaired. Chain drive covers need to be cleaned and oil replaced.

Trash Rakes: N/A

Discharge Pipe Flap Gates:

1. Unknown.

Pump Station Building Structure:

1. No signs of damage to the building exterior.
2. Concrete walkway and handrails around the building are in good condition.
3. No damage to the concrete basement under the building.
4. No damage to the discharge pipe supports.
5. No damage to the radiators' steel platform, handrails and gratings.

Pump Station Building Roof:

1. New roof was installed by the parish after Katrina.

Pump Station Building Doors & Windows:

1. No door or windows are damaged.

Pump Station Mechanical Building Systems: [Mechanical Ventilation (Louvers & Fans)]:

1. Operational.

Pump Station Electrical Bldg. Systems: Building Power, Panelboard. Lights, Communications):

1. Much of electrical conduit running from building to intake area was submerged.
2. Eight lighting fixtures on the lower level took water.
3. Remote engine alarm panel (Rochester Instrument Systems Model Number AN-3196A) does not function.
4. Lightning rod is no longer properly secured at roof.
5. Ramp floodlight (between radiators 2 & 3) is not working.
6. Sewage aerator motor and timer went under water.
7. Water leaked into fluorescent lights (QTY 4) in office.
8. Exit lights (QTY 4) are damaged.
9. Light over office door does not illuminate
10. One engine room light is out.
11. One floodlight on the buiding wall exterior is not working.
12. One on/off switch and one duplex receptacle were submerged.
13. Exterior telephone jack went under water?

Other:

1. Scours at sheet piles behind pump station has been covered with dirt by the parish. (300’ long x 10’ wide x 3’ deep).
2. Scour section behind pump station adjacent to the west slab, has not yet been patched. (40’ long x 20’ wide x 3’ deep).
3. Scoured area under the West end stairs. (20’ x 20’ x 1’ deep)
4. The West diesel Fuel storage tank has moved 2” south. No damage to the foundations or pipes attached to tank. An angle support for the lower pipe is bent.
5. Muffler flaps are broken and missing.

PUMP STATION INSPECTION REPORT

Name of Flood Control Works (Federal/Non-Federal):
St. Bernard Parish – BAYOU DUCROS Pump Station No. 7

Date/Hour Inspection Began/Ended:
Date: 11-2-05 Time: 10:45 AM

Inspectors:
Corps Representatives:

Drainage District Officials:

River/Forebay Elevations:
River El.: _____ Stage El.: _____ Zero Gage El.: _____
Forebay El.: -8.0' Stage El.: _____ Zero Gage El.: _____

General Comments:

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
SECTION I				***FOR USE DURING INITIAL ELIGIBILITY INSPECTION ONLY***	
1. Total Capacity	X			Record Total Pump Station Capacity.	1002 cfs capacity
SECTION II				***FOR USE DURING ALL PUMP STATION INSPECTIONS***	
2. Pump Station Building		X		A The Pump Station building is in good structural condition. No apparent major cracks in concrete, no subsidence, roof is not leaking, Intake louvers clean, clear of debris. Exhaust fans operational and maintained. Lights operational. Safe working environment. M Spalling and cracking are present, or minimal subsidence is evident, or roof leaks, or other conditions are present that need repair but do not threaten the structural integrity or stability of the building. U Any condition that does not meet at least Minimum Acceptable standard.	List Damages: 1. New roof was installed by the parish after Katrina. 2. Scours at sheet piles behind pump station has been covered with dirt by the parish. (300' long x 10' wide x 3' deep). ***See Photos 126 & 127*** 3. Scour section behind pump station adjacent to the west slab, has not yet been patched. (40' long x 20' wide x 3' deep). ***See Photo 128 & 129*** 4. Scoured area under the West end stairs. (20' x 20' x 1' deep) ***See Page 130*** 5. The West diesel Fuel storage tank has moved 2" south. No damage to the foundations or pipes attached to tank. An angle support for the lower pipe is bent***. See Photo 131*** 6. Eight lighting fixtures on the lower level took water. 7. Lightning rod is no longer properly secured at roof. 8. Ramp flood light (between radiators 2 & 3) is broken. ***See Photo 132*** 9. Sewage aerator motor and timer went under water. ***See Photo 133*** 10. Water leaked into fluorescent lights (QTY 4) in office. 11. Exit lights (QTY 4) damaged. ***See Photo 134*** 12. Light over office door does not illuminate. 13. One engine room light is out. 14. One floodlight on the building wall exterior is not working. ***See Photo 135*** 15. One on/off switch and one duplex receptacle were submerged. 16. Exterior telephone jack went under water

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
3. Pumps	X			A All pumps are fully operational. M All pumps are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next period of usage. U One or more primary pumps are not operational, or noted discrepancies have not been corrected.	List Major Problems/Damage: 1. Broken drain line from No. 2 pump sump. ***See Photo 136***
4. Motors				A All items are fully operational. M All systems are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next expected period of usage. U One or more primary motors are not operational, or noted discrepancies have period of usage.	List Major Problems/Damage: N/A
5. Engines	X			A All items are fully operational. M All systems are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next expected period of usage. U One or more primary motors are not operational, or noted discrepancies have period of usage.	List Major Problems/Damage: 1. Exhaust flappers weights and cover plates are missing and insulation on exhaust lines is cracking. Small leak on radiator for no. 2 pump. ***See Photos 137 & 138*** 2. Operator says remote engine alarm panel (Rochester Instrument Systems Model Number AN-3196A) does not function. ***See Photos 139 & 140*** 3. Operator says Radiator #1 motor (15HP) makes a squealing noise. ***See Photo 141***

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
6. Gear Reducers	X			A All items are fully operational. M All systems are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next expected period of usage. U One or more primary motors are not operational, or noted discrepancies have period of usage.	List Major Problems/Damage:
7. Sumps/Trash Racks/Trash Rakes		X		A Sumps/Trash Racks are free of concrete deterioration, protected from Permanent damage by corrosion and free of floating and sunken debris. Sumps are clear of Accumulated silt. Passing debris is minimized by spacing of trash rack bars. Trash rakes as applicable are fully operational. M Trash racks and sumps have some accumulated silt or debris but are not currently inhibiting the pump(s) performance. No periodic maintenance has been performed. Present condition could be expected to perform through the next expected period of usage provided removal of floating debris is accomplished. U Proper operation can not be ensured through the next period of usage. Possible damage could result to the pumping equipment with continued operation.	List Damage: 1. Trash racks no. 1 and no. 3 are in serviceable condition, but the gear boxes need to be inspected to determine if bearings and gears need to be repaired. Trash rake No. 2 chain pop off sprocket and need to be repaired. ***See Photos 142 & 143*** 2. Much of electrical conduit running from building to intake area was submerged.
8. Other Metallic Items				A All metal parts in plant/building show no signs of corrosion. M Corrosion on metallic parts (except equipment anchors) and deterioration period of usage. U Any condition that does not meet at least Minimum Acceptable standards.	List Damage:

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
9. Ancillary Equipment i.e. Compressed Air Siphon Breakers Fuel Supply Vacuum Priming Pump Lubrication Heating/Ventilation Engine Cooling Engine Oil Filtering		X		A All equipment is fully operational. M Ancillary equipment is operational and deficiencies/minor discrepancies are such that equipment could be expected to perform through the next period of usage. U One or more of the equipment systems is inoperable. The present condition of the inoperable equipment could reduce the efficiency of the pump station or jeopardize the pump station's role in flood protection.	List Damage: 1. Canal Level gauge needs adjustment. Front end loader, lawn mower, weedeater, pressure washer, paint sprayer were submerged in salt water and are inoperable. Office A/C is inoperable. Canal level gauge is bent. Fuel tanks moved slightly and need to be repositioned. Sanitation plant needs service and aerator is broken. Water line has a broken valve. ***See Photos 144, 145, 146, 147, 148, 149 & 150*** 2. Indicator boards on "A" and "B" fuel day tanks are damaged.
10. Backup Ancillary Equipment (e.g. Standby Generator)		X		A Adequate, reliable, and enough capacity to meet demands. Backup units/equipment are properly sized, operational and in an overall well maintained condition. M Backup ancillary equipment is operational and deficiencies/minor discrepancies are such that equipment could be expected to perform through the next period of usage. U Backup ancillary equipment not considered reliable to sustain operations during flooding conditions. N/A Not Applicable if no backup equipment exists.	List Damage: 1. Generator has oil leak from control sensor and exhaust impacts and blackens level gauge on cooler. ***See Photo 151***
11. Pump Control System		X		A Operational and maintained free of damage, corrosion, or other debris. M Operational with minor discrepancies. U Not operational, or uncorrected discrepancies	List Damage: 1. Level gauges front and rear are inoperable. 2. Intake water level transducer works intermittently.

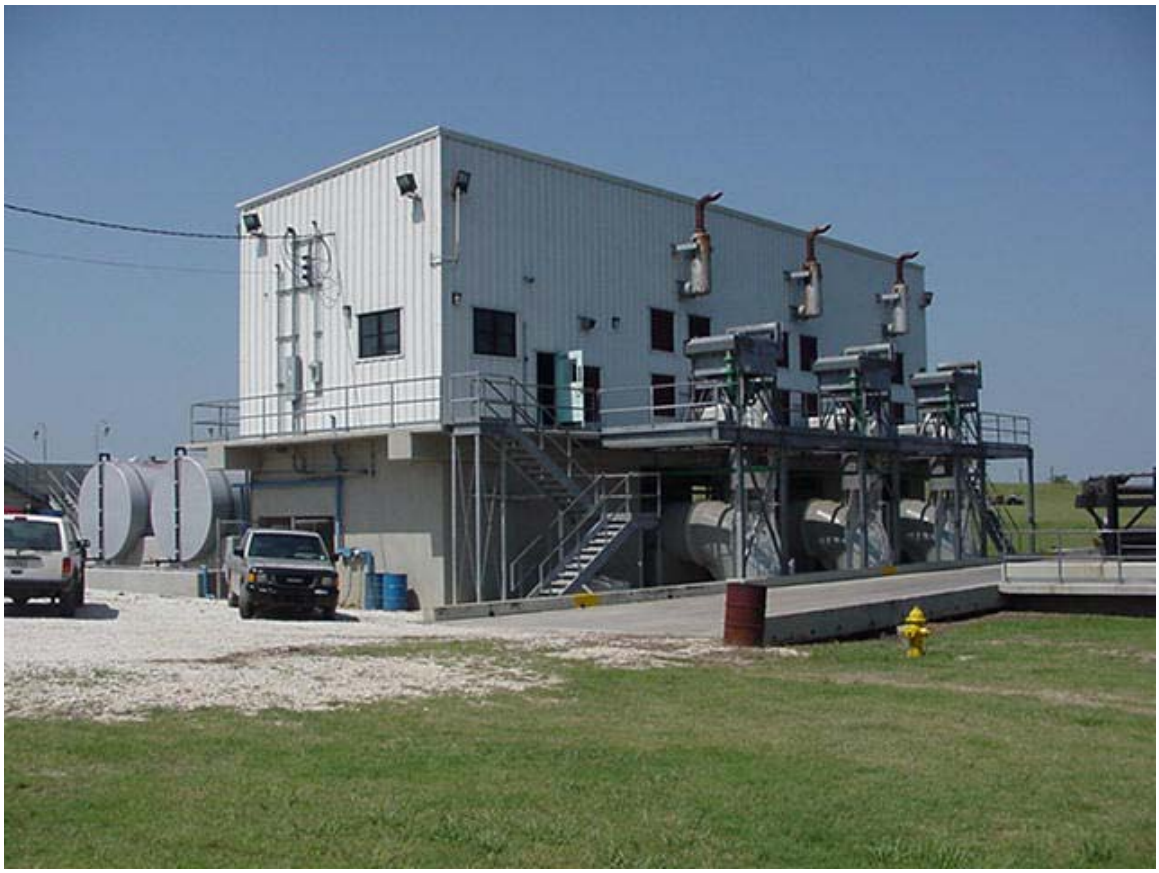
PUMP STATION MAINTENANCE INSPECTION GUIDE

12. Intake and Discharge Outlets	X			Functional. No damaging erosion evident. Opening/closing devices for vertical gates, flap gates, etc. are functional in a well-maintained condition. (A or U.)	List Damage: 1. Pump discharge lines thru the levee leak during high water. Automatic valve on pump #3 leaks thru seat when closed. ***See Photos 152 & 153***
13. Wire Insulation and Splices (For pump stations with Electric pumps only)				A Visual inspection identifies that cable jackets and insulation have good integrity. Visual inspection identifies that splices and watertight seals have good integrity. M Visual inspection identifies that cable jackets and insulation may have damage and their reliability is suspect. Visual inspection identifies splices and watertight seals may have damage and their reliability is suspect. U Cable Jackets, Splices, and Watertight Seals are identified to have damage.	List Damage:
14. Final Remarks:					

GENERAL INSTRUCTIONS

1. All items on this guide must be addressed and a rating given.
2. The lowest single rating given will determine the overall rating for the pump station.
3. Additional areas for inspection will be incorporated by the inspector into this guide if the layout or physical characteristics of the pump station warrant this. Appropriate entries will be made in the REMARKS block.
4. Rating Codes:
   A - Acceptable
   M - Minimally Acceptable
   U - Unacceptable

The cost estimate information contained on this page is proprietary to the Government and can not be posted on the public website at this time.



ST. MARY PUMPING STATION #8

Name : St. Mary Pumping Station #8
Parish : St. Bernard
Address 3616 Bayou Rd. Verret, La. 70085
Phone Numbers : 504-682-0591
Station Manager : Westley Bracamontes (beeper # 504-547-4216)
Position : Latitude 29:57:41.8 Longitude –89:57:52.2
Pump From : Twenty Arpent Canal
Pump To: Wetlands To Rear Of Station and Lake Lery

Facility Floor Elevation: 16 ft. (N.G.V.D.)

Capacity (gpm)

Pump1 = 125,000 gpm
Pump2 = 125,000 gpm
Pump3 = 125,000 gpm

Pump Station Condition and Potential for Flood Proofing Checklist

ST. MARY PUMPING STATION #8

Name : St. Mary Pumping Station #8
Parish : St. Bernard
Address 3616 Bayou Rd. Verret, La. 70085
Phone Numbers : 504-682-0591
Station Manager : Westley Bracamontes (beeper # 504-547-4216)
Position : Latitude 29:57:41.8 Longitude –89:57:52.2
Pump From : Twenty Arpent Canal
Pump To: Wetlands To Rear Of Station and Lake Lery

Facility Floor Elevation: 16 ft. (N.G.V.D.)

Capacity (gpm)

Pump1 = 125,000 gpm
Pump2 = 125,000 gpm
Pump3 = 125,000 gpm

2. Ever flooded?
   Only on lower level up to about 1 to 2 ft from bottom of concrete of upper level. Water level did not reach operating floor.

3. Flood watermark height above building floor
   n/a

4.. Building Walls
   a. Wall construction material (i.e. brick, concrete, metal)
      Reinforced concrete walls – lower level fuel tank containment areas.
      Rigid frame metal building – pump and control room area.
   b. Height of non-porous material above building floor(i.e. brick, concrete, sealable metal)
      Approximately 25 feet.

5. Floor
   a. Material (i.e. concrete)
      Concrete
   b. Condition (i.e. cracked, porous, non-porous)
      Good, non-porous.
   c. Floor drains (i.e. can be blocked to prevent backflow)
      n/a
   d. Sump pit to pump water from pump & driver area
      n/a

6. Roof
    a. Material (i.e. metal)
        Metal
    b. Condition (i.e. intact, damaged, repair schedule)
        Station operator reports that roof panels are loose and in need of repair.

7. Pumps
    a. Capacity of each pump, cfs
        Pumps 1, 2, & 3 – 334 cfs each

    b. Driver for each pump (i.e. electric motor, diesel motor, diesel motor/generator/electric motor combination)
        Pumps 1, 2, & 3 – all 3 are diesel motor driven

    c. Condition of each pump/motor combination
        i. Operating
            Pumps 1, 2 & 3 were operational.
        ii. Needs scheduled repairs (identify)
            n/a
        iii. Inoperable - identify repair needs
            n/a
        iv. Identify repair schedule if possible
            n/a

8. Overall condition of pump station facility
    a. Access (i.e. roads blocked by debris, roads clear,)
        access is ok, roads clear.
    b. Site (i.e. debris on grounds, mud inside building, cleaned)
        Grounds clear of debris.
    c. Type and status of Corps work (i.e. debris removal - complete)
        n/a
    d. Type and status of work by others (i.e. GE - drying motors - 50% complete)
        n/a
9. Power source
    a. Power lines (i.e. down, up and functioning, underground, repair schedule)
        Utility company power not working, no schedule for resumption of service yet.
    b. Transformers (i.e. above flood level, flooded, repair schedule)
        Location intact on pole, not known if functional since there is no service to transform yet.
    c. Backup power (i.e. none, diesel/electric generator)
        diesel/electric generator operational and capable of running all power at station.
    d. Potential to elevate primary and backup power source above flood level
        n/a – was not flooded.

10. Operator hurricane protection

a. "Safe haven" for operators (i.e. bunker style non-flooding protection during floods)
no
b. Life support (i.e. potable water, toilets, showers, food)
yes
c. Can facility be operated from bunker?
no

Pump Station Observation Sheet

Name of Pump Station and/or Pump Station No. – SAINT MARY PUMPING STATION No. 8

Parish (drainage basin) where pump station is located: **St. Bernard Parish**

A. Number of Pumps – 3 Pumps

Pump Info (Circle the appropriate answer) The pumps may be operable and still be damaged. What about submersed equipment if any such as impellers? Pump capacity gpm (or cfs), Hp, Voltage, Cycles (Hz), discharge size, horizontal or vertical

Pump No. 1: Drive Type - (Diesel Engine) Electric Motor Operable - (Yes) No

Remarks –

1. Engine coolant piping replaced with 20 ft. hose. Original piping should be installed.

Pump No. 2: Drive Type - (Diesel Engine) Electric Motor Operable - (Yes) No

Remarks –

Pump No. 3: Drive Type - (Diesel Engine) Electric Motor Operable - (Yes) No

Remarks -

B. Auxiliary Equipment and Features (note damage and problems):

Incoming Electric Power Service:

1. Utility has not gotten power.back to the transformers that supply the facility.

Standby Backup Power Equipment:

1. Operating.

Switchgear and/or Motor Control Centers:

1. In good condition (from outside).

Motor Feeder Power Cables and wiring: (motor cables and splice seals):

1. N/A

Pump Controls Systems:

1. Discharge level gauge does not operate., stick gauge needs replacement.
2. Discharge water level transducer is missing.

Fuel Systems and Supply:

1. Operational.

Compressed Air System:

1. N/A

Trash Racks:

1. Screens are in good condition.
2. Walkway handrails are in good condition.
3. Concrete walkway is in good condition.

Trash Raking Equipment:

1. Rake gear boxes need to be inspected and repaired.

Trash Rakes: N/A

Discharge Pipe Flap Gates:

1. Unknown.

Pump Station Building Structure:

1. No signs of damage to the building exterior.
2. Concrete walkway and handrails around the building are in good condition.
3. No damage to the concrete basement under the building.
4. No damage to the discharge pipe supports.
5. No damage to the radiators' steel platform, handrails and gratings.

Pump Station Building Roof:

1. Roof panels are loose and need to be tightened.

Pump Station Building Doors & Windows:

1. No door or windows are damaged.

Pump Station Mechanical Building Systems: [Mechanical Ventilation (Louvers & Fans)]:

1. Office AC needs remote control.

Pump Station Electrical Bldg. Systems: Building Power, Panelboard. Lights, Communications):

1. Much of electrical conduit running from building to intake area was submerged.
2. Eight lighting fixtures on the lower level took water.
3. Sewage aerator motor and timer went under water.
4. One floodlight on the building wall exterior is not working.
5. Two on/off switches and one GFCI duplex receptacle were submerged.
6. Exterior telephone jack went under water?

Other:

1. Scour section behind pump station on the south side adjacent to discharge pipe no.1. (5' long x 5' wide x 2' deep).

PUMP STATION INSPECTION REPORT

Name of Flood Control Works (Federal/Non-Federal):
St. Bernard Parish – SAINT MARY Pump Station No. 8

Date/Hour Inspection Began/Ended:
Date: 11-2-05 Time: 3:10 PM

Inspectors:
Corps Representatives:

Drainage District Officials:

River/Forebay Elevations:
River El.: _____ Stage El.: _____ Zero Gage El.: _____
Forebay El.: Stage El.: _____ Zero Gage El.: _____

General Comments:

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
SECTION I				***FOR USE DURING INITIAL ELIGIBILITY INSPECTION ONLY***	
1. Total Capacity	X			Record Total Pump Station Capacity.	1002 cfs capacity
SECTION II				***FOR USE DURING ALL PUMP STATION INSPECTIONS***	
2. Pump Station Building		X		A The Pump Station building is in good structural condition. No apparent major cracks in concrete, no subsidence, roof is not leaking, Intake louvers clean, clear of debris. Exhaust fans operational and maintained. Lights operational. Safe working environment. M Spalling and cracking are present, or minimal subsidence is evident, or roof leaks, or other conditions are present that need repair but do not threaten the structural integrity or stability of the building. U Any condition that does not meet at least Minimum Acceptable standard.	List Damages: 1. Roof panels are loose and need to be tightened 2. Scour section behind pump station on the south side adjacent to discharge pipe no.1. (5' long x 5' wide x 2' deep). ***See Photo 154*** 3. Eight lighting fixtures on the lower level took water. 4. Sewage aerator motor and timer went under water. 5. One floodlight on the building wall exterior is not working. 6. Two on/off switches and one GFCI duplex receptacle were submerged. 7. Exterior telephone jack went under water

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
3. Pumps	X			A All pumps are fully operational. M All pumps are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next period of usage. U One or more primary pumps are not operational, or noted discrepancies have not been corrected.	List Major Problems/Damage:
4. Motors				A All items are fully operational. M All systems are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next expected period of usage. U One or more primary motors are not operational, or noted discrepancies have period of usage.	List Major Problems/Damage: N/A
5. Engines		X		A All items are fully operational. M All systems are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next expected period of usage. U One or more primary motors are not operational, or noted discrepancies have period of usage.	List Major Problems/Damage: 1. No. 1 engine coolant hose is 20 ft. too long. Should be pipe with expansion joints. ***See Photos 155 & 156***

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
6. Gear Reducers	X			A All items are fully operational. M All systems are operational and deficiencies/minor discrepancies are such that pumps could be expected to perform through the next expected period of usage. U One or more primary motors are not operational, or noted discrepancies have period of usage.	List Major Problems/Damage: 1. Gear upper joint has small leaks on pump no. 2. ***See Photo 157***
7. Sumps/Trash Racks/Trash Rakes		X		A Sumps/Trash Racks are free of concrete deterioration, protected from Permanent damage by corrosion and free of floating and sunken debris. Sumps are clear of Accumulated silt. Passing debris is minimized by spacing of trash rack bars. Trash rakes as applicable are fully operational. M Trash racks and sumps have some accumulated silt or debris but are not currently inhibiting the pump(s) performance. No periodic maintenance has been performed. Present condition could be expected to perform through the next expected period of usage provided removal of floating debris is accomplished. U Proper operation can not be ensured through the next period of usage. Possible damage could result to the pumping equipment with continued operation.	List Damage: ***1.*** The gear boxes need to be inspected to determine if bearings and gears need to be repaired***. See Photo 158*** 2. Much of electrical conduit running from building to intake area was submerged.
8. Other Metallic Items				A All metal parts in plant/building show no signs of corrosion. M Corrosion on metallic parts (except equipment anchors) and deterioration period of usage. U Any condition that does not meet at least Minimum Acceptable standards.	List Damage:

PUMP STATION MAINTENANCE INSPECTION GUIDE

RATED ITEM	A	M	U	EVALUATION	REMARKS
9. Ancillary Equipment i.e. Compressed Air Siphon Breakers Fuel Supply Vacuum Priming Pump Lubrication Heating/Ventilation Engine Cooling Engine Oil Filtering		X		A All equipment is fully operational. M Ancillary equipment is operational and deficiencies/minor discrepancies are such that equipment could be expected to perform through the next period of usage. U One or more of the equipment systems is inoperable. The present condition of the inoperable equipment could reduce the efficiency of the pump station or jeopardize the pump station's role in flood protection.	List Damage: 1. Front end loader, lawn mower, pressure washer, Ford tractor/mower were submerged in salt water and are inoperable. Office A/C is inoperable. Rain gauge is missing. Sanitation plant needs service and aerator is broken. Sump pump for rear drain is inoperable. ***See Photos 159, 160 & 161***
10. Backup Ancillary Equipment (e.g. Standby Generator)				A Adequate, reliable, and enough capacity to meet demands. Backup units/equipment are properly sized, operational and in an overall well maintained condition. M Backup ancillary equipment is operational and deficiencies/minor discrepancies are such that equipment could be expected to perform through the next period of usage. U Backup ancillary equipment not considered reliable to sustain operations during flooding conditions. N/A Not Applicable if no backup equipment exists.	List Damage:
11. Pump Control System		X		A Operational and maintained free of damage, corrosion, or other debris. M Operational with minor discrepancies. U Not operational, or uncorrected discrepancies	List Damage: 1. Level gauges in rear is inoperable. Stick gauge in basin needs repair. 2. Intake water level transducer is not working.

PUMP STATION MAINTENANCE INSPECTION GUIDE

12. Intake and Discharge Outlets	X			Functional. No damaging erosion evident. Opening/closing devices for vertical gates, flap gates, etc. are functional in a well-maintained condition. (A or U.)	List Damage:
13. Wire Insulation and Splices (For pump stations with Electric pumps only)				A Visual inspection identifies that cable jackets and insulation have good integrity. Visual inspection identifies that splices and watertight seals have good integrity. M Visual inspection identifies that cable jackets and insulation may have damage and their reliability is suspect. Visual inspection identifies splices and watertight seals may have damage and their reliability is suspect. U Cable Jackets, Splices, and Watertight Seals are identified to have damage.	List Damage:
14. Final Remarks:					

GENERAL INSTRUCTIONS

1. All items on this guide must be addressed and a rating given.
2. The lowest single rating given will determine the overall rating for the pump station.
3. Additional areas for inspection will be incorporated by the inspector into this guide if the layout or physical characteristics of the pump station warrant this. Appropriate entries will be made in the REMARKS block.
4. Rating Codes:
   A - Acceptable
   M - Minimally Acceptable
   U - Unacceptable

The cost estimate information contained on this page is proprietary to the Government and can not be posted on the public website at this time.