

# Nipomo Community Services District



## Southland WWTF Improvements Phase 1 Project Monthly Progress Report



Prepared By:  
MNS Engineers, Inc.

**December 2013**

# Schedule and Budget Summary

## Schedule Summary

Notice to Proceed	July 30, 2012
Original Contract Days	645
Contract Days Added	60
Revised Contract Days	705
Elapsed Time (Days)	(516)
Remaining Time (Days)	189
Contract Completion Date	July 5, 2014
Time Elapsed to Date	73%
Work Completed to Date	84%
Approved Change Orders (Days)	60 days

## Budget Summary

Original Contract Amount	\$10,224,900.47
Approved Change Orders (Cost)	\$1,043,513.08
Revised Contract Amount	\$11,268,413.55
Previous Payments	\$9,191,247.90
Current Month Pay Request	\$253,294.79
Total Work Completed	\$9,444,542.69
Work Remaining	\$1,823,870.86

# Progress Summary

## General Site Work – Piping and Electrical

### Summary of Work:

Cushman completed installation and removal of the existing inlet structures at Infiltration Ponds 3 thru 8. Next they completed installation and testing of the 24" SE2 piping and inlets to Infiltration Ponds 3 thru 8 along with forming and pouring concrete splash pads at Ponds 4 thru 8. The plant is now using the new piping to transfer effluent water from existing settling Pond 4 to the Infiltration Ponds. Cushman is connecting the 1-inch and 2-inch NPW piping to the main 6-inch NPW line to provide the WWTF with non-potable water at the hose and wash down locations. Berg continues to install local control panels and disconnect switches at various locations, pulling control and power wire as those panels are completed.

### Pictures:



Breaking up existing concrete inlet structure at Infiltration Ponds 4 thru 8 for removal and replacement.





Breaking up concrete from inlet structures to prepare for disposal.



Cushman installing 24-inch SE2 piping and valves.





Cushman installing the 24-inch SE2 piping to the Infiltration Ponds.



Cushman preparing to pour thrust block at cleanout on 24-inch SE2 pipe line.





Concrete encasement around a cleanout on the 24-inch SE2 pipe line.



Cushman installing the 24-inch SE2 pipe to the Infiltration Ponds.





Cushman installing and backfilling the 24-inch SE2 piping to the Infiltration Ponds.



Cushman installing 18-inch inlet piping and valve from the 24-inch SE2 pipe to one of the Infiltration Ponds.





Cushman installing 24-inch SE2 piping.



Grading at Pond #3 to rebuild pond sides after 24-inch SE2 pipe installation.





Compacting around inlet pipe at Infiltration Ponds.



Laying out forms for inlet structures at Infiltration Ponds.





Forms in place for concrete splash pad at inlet structures.



Reinforcing in place for splash pad at inlet structures.





Cushman pouring 4,000 psi concrete at inlet structure splash pads.



Finishing splash pads at inlet structures to Infiltration Ponds 4 thru 8.





Cushman compacting material around new splash pads for inlets to Infiltration Basins 4 thru 8.



Cushman installing NPW and hose bibs at Clarifiers.





Installing the 3-inch NPW line.



## **Process 10 Influent Pump Station**

### **Summary of Work:**

Cushman excavated and installed the 16-inch RW piping with plug and check valves from the Influent Pump Station to the Headworks, then performed a successful pressure test. Cushman also completed excavation, placement of base material, installed forms and rebar and poured the truck wash down slab.

### **Pictures:**



Cushman installing exposed 16-inch RW piping.





Cushman installing the 16-inch RW piping from the Influent Pump Station to the Headworks.



Installing the 16-inch RW from the Influent Pump Station to the Headworks.





Cushman grading for the truck wash down station slab.



Cushman forming the truck wash down station slab.





CMC Rebar tying reinforcing for the truck wash down station slab.



Cushman pouring 4,000 psi concrete for the truck wash down station slab.



# **Process 20 & 30 Headworks Screening System & Grit Removal System**

## **Summary of Work:**

Bergelectric constructed racks and installed PVC coated rigid conduit and control panels for the screens and grit collection system. The aluminum handrail was installed at the Headworks structure. Both control and power wire has been pulled and terminated at panels. KNK Coating continuing work coating pipe and actuators.

## **Pictures:**



Bergelectric installing PVC coated conduit.





Bergelectric pulling wires to the Headworks.



Cushman installing the aluminum handrail.





Finish coating on the RAS piping.



KNK Coating applying red coating to the actuators.



## **Process 40 Aeration Basin**

### **Summary of Work:**

KNK Coating applied primer and coating to the AR piping at the Aeration Basin.

### **Pictures:**



KNK Coating applying primer to the AR piping.



## **Process 45 Electrical/Blower Building**

### **Summary of Work:**

Bergelectric continued to terminate both power and control wiring in ICP, MCC, VFD panels and at control panels in various locations, termination of both control and power is ongoing. Bergelectric has a lock out tag out system in place during this process. KNK Coating prepped and painted the doors and trim.

### **Pictures:**



Bergelectric pulling wires in the MCC room.





KNK Coating abrading and applying prime coat to the doors and trim.



KNK Coating applying prime coat to the doors and trim.



## **Process 50 – Secondary Clarifier No. 1 and 2.**

### **Summary of Work:**

The clarifiers were filled with water and the mechanisms tested. During testing, Cushman also utilized RAS/WAS Pumps to transfer water from one clarifier to the other. Cushman has installed flow meters at all RAS and WAS vaults and wire has been terminated. Bergelectric also installed conduit and boxes at the Scum Pump Station and terminated leads at the RAS/WAS Pump Stations.

### **Pictures:**



Cushman applying sealant to weirs in clarifiers.





Cushman using telescopic valve to fill the RAS/WAS Pump Station.



Filling Clarifier #1 for testing by transferring water from the Aeration Basin.





Cushman installing the flow meter in the WAS vault.



Flow meter installed in the RAS vault.





Bergelectric installing conduit and boxes on the rack at the Scum Pump Station.

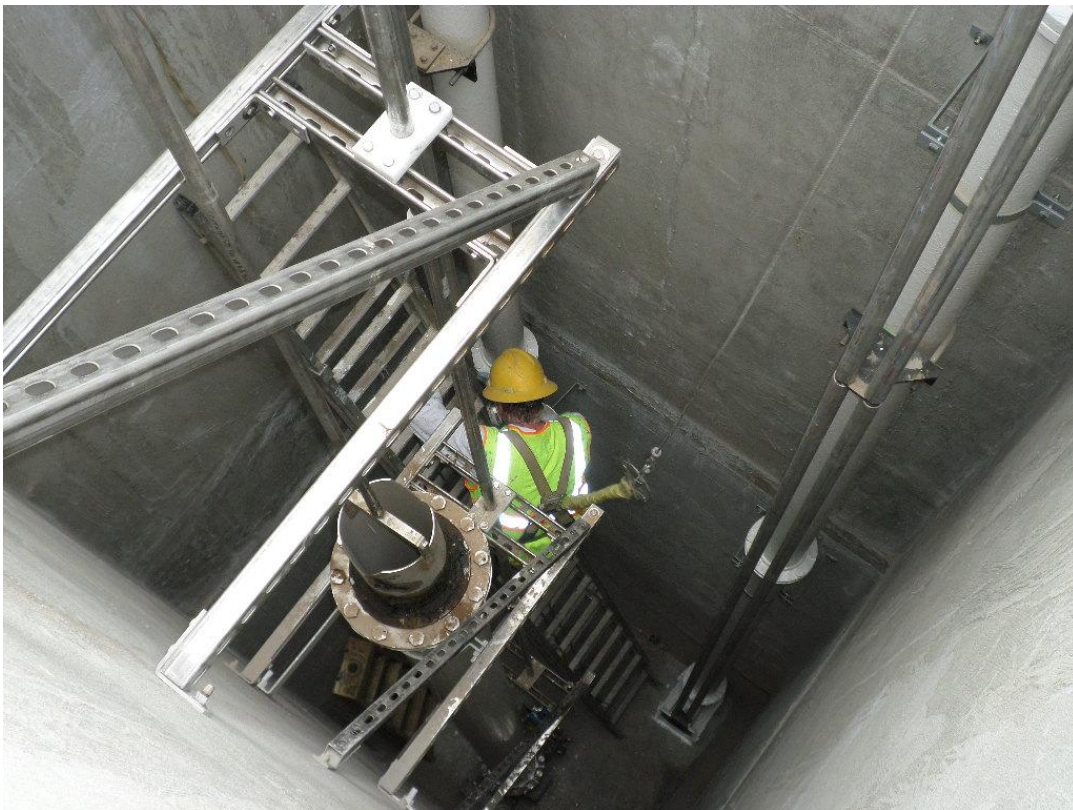


Bergelectric pulling leads to disconnect switches at the Scum Pump Station.



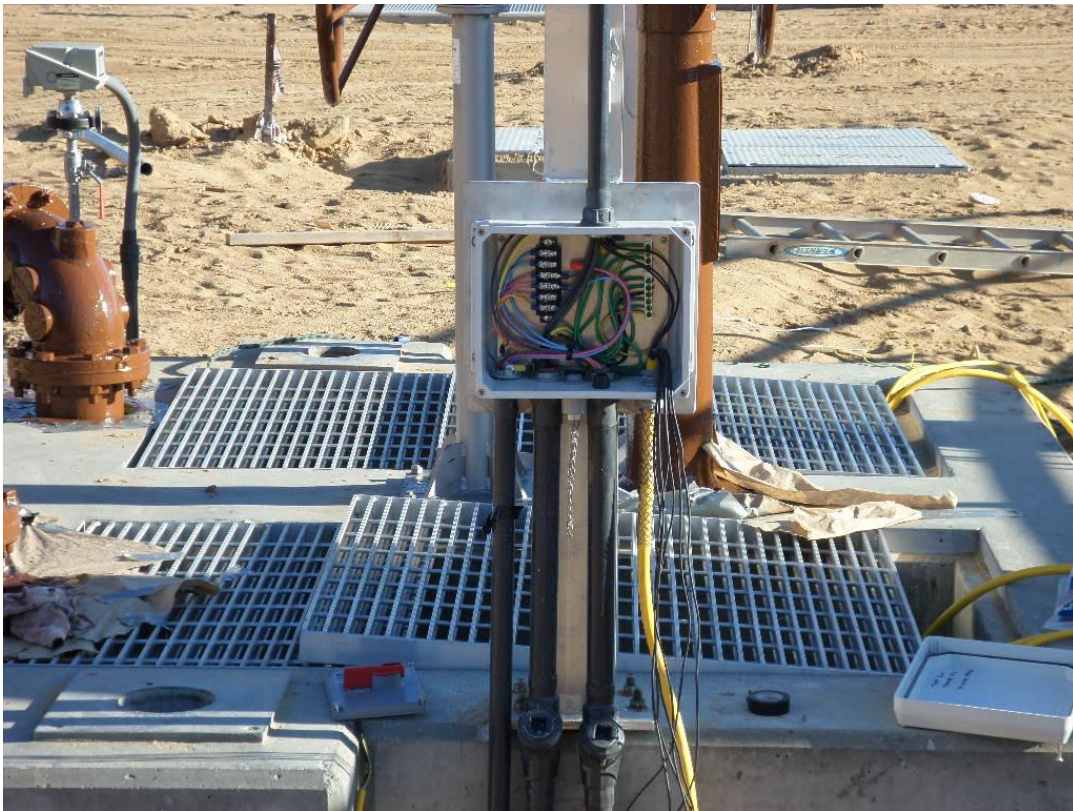


KNK Coating pipe inside RAS/WAS Pump Station #1.



KNK applying coating to pipe inside RAS/WAS Pump Station #2.





Bergelectric terminating leads at the RAS/WAS Pump Station #2.



Bergelectric terminating wires at the pressure switches at RAS/WAS Pump Station #2.





Cushman lowering pump back into place at the RAS/WAS Pump Station #2 after checking rotation.



## **Process 60 – Sludge Thickening System**

### **Summary of Work:**

Bergelectric terminated power and control wires at the Sludge Thickening System equipment and lighting at the structure. Cushman has installed NPW and potable water piping at structure.

### **Pictures:**



KNK Coating touching up coatings on Sludge Thickening Structure.





Bergelectric terminating power feed wire at the Sludge Thickening Structure.



Bergelectric CAD welding the ground wire to the steel column at the Sludge Thickening Structure.



# **Process 70 – Process Water Pump Station and Sodium Hypochlorite Storage**

## **Summary of Work:**

Cushman installed the Vertical Turbine Pumps. Bergelectric terminated power and control wires at Panel 70 along with interior and exterior lighting and Vertical Turbine Pump disconnect switches and exhaust fans at the Sodium Hypochlorite Storage building. KNK Coating completed coating of the Hydropneumatic Tank and piping.

## **Pictures:**



Cushman installing the Vertical Turbine Pumps.





Bergelectric installing the flex conduit at the Vertical Turbine Pumps.



Cushman installing the air release valve and switch with gauge at the Vertical Turbine Pumps.





KNK Coatings applying Devoe 203 primer to the Hydropneumatic Tank.



Finish coating applied by KNK Coating to the hydropneumatic tank.





Dry packing installed at hydropneumatic tank supports.



Bergelectric installing gauge and sensors at the Hydropneumatic Tank.

## **Process 90 – Sludge Drying Beds**

### **Summary of Work:**

KNK Coating applied finish coating to the TWAS piping.

### **Pictures:**



KNK Coating applying finish coat to the TWAS piping.



## **Commissioning and Testing**

### **Summary of Work:**

Parkson conducted tests of the blowers during December. The Wemco pump representative verified installation and conducted startup of submersible pumps at both RAS/WAS Pump Stations and Scum Pump Station. The weir pump representative verified installation and conducted startup of Vertical Turbine Pumps at the Processed Water Pump Station. Cushman transferred water from the Aeration Basin through the system using the RAS/WAS Pump Stations and then pumped water back to the Headworks showing functional use of that portion of system. The clarifier mechanisms have been tested with clarifiers filled with water.