

BIOSOLIDS EMS — ELEMENT 11.0

EMERGENCY PREPAREDNESS & RESPONSE



REVISION	EFFECTIVE DATE	APPROVAL SIGNATURE
12	October 06, 2021	

PURPOSE

The purpose of this element is to document and respond effectively to emergencies associated with biosolids management activities, as well as other incidents, chemical spills, weather-related emergencies, abnormal conditions, threats to plant security, and other contingencies.

SCOPE

This procedure covers emergencies associated with biosolids management activities as well as other contingencies related to the treatment of wastewater.

KEY WORDS

- Emergency Preparedness
- Emergency Response
- EMS Management Team
- Standard Operating Procedures (SOPs)

RESPONSIBILITY

The implementation of the emergency preparedness and response procedures are the responsibility of the Assistant Director (Plant Operations), Plant Manager (Plant Operations – Wastewater), Sr. Capital Projects Officer (Plant Operations), Engineering Manager (Plant Operations), Superintendent (Plant Operations-Wastewater), Biosolids EMS Manager (City), Biosolids Manager (Contractor), Assistant Superintendents (Plant Operations-Wastewater Operations and Maintenance), and the Village Creek Safety Coordinator (Plant Operations).

PROCEDURE

Emergency procedures are established and implemented to protect human health, the environment and existing infrastructure. The Village Creek Water Reclamation Facility (VCWRF) and the Biosolids Contractor have developed and implemented emergency procedures for biosolids management activities as well as other general safety-related topics. These are discussed in more detail in the sections below.

I. Emergency Response – Biosolids Management Activities

Emergency procedures associated with biosolids management activities will fall under one of two broad categories:

1. Liquid Sludge Spills
2. Biosolids Spills (post dewatering)

Depending on the type and location of the spill, either the City or the Biosolids contractor will be responsible for spill response activities. However, both entities will need to coordinate with one another to provide an effective and thorough response.

Liquid Sludge Spills

- **Liquid Sludge Spills at VCWRF, Drying Beds or 40 Acres**

Spill response actions should be taken as soon as possible to mitigate any negative environmental or health-related effects. Operations and Maintenance personnel at Village Creek will be responsible for

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implementing the appropriate spill response procedures as detailed in PLNT 07.001. Spill notification for external agencies such as the Texas Commission on Environmental Quality (TCEQ) may be required depending on the nature and characteristics of the spill. Notification procedures are documented in PLNT 07.002.

- **Liquid Sludge Spills at the Biosolids Dewatering Facility**

The Biosolids Contractor is responsible for developing and implementing SOPs for liquid sludge spills at the Dewatering Facility. The Biosolids Contractor shall notify the City's Biosolids Manager of any such incident.

Biosolids Spills

- **Biosolids Spills at the Dewatering Facility**

The Biosolids Contractor is responsible for developing and implementing SOPs for biosolids spills at the Dewatering Facility. The Biosolids Contractor shall notify the City's Biosolids Manager of any such incident.

- **Biosolids Spills During Transport**

The Biosolids Contractor is responsible for developing and implementing SOPs for biosolids spills that occur during transport. These can be found in the Contractor's "Biosolids Spill Response SOP." The Contractor maintains a copy of this plan at their office. An emergency spill kit is maintained at the Dewatering Facility and emergency contact numbers are maintained in each truck.

When spills occur on public right-of-ways (city, county, state), the Biosolids Contractor shall be responsible for cleanup activities and notifying all appropriate agencies. Biosolids Contractor shall also notify the Biosolids Manager (City) as soon as possible after any such incident.

- **Biosolids Incident Report**

Following each spill and cleanup, the Contractor completes an Incident Report. An example of the "Incident Report" form is included at the end of this element. The City and the Contractor discuss the cause of the spill, the spill response, any measures that need to be taken to prevent similar spills, and any other corrective actions that need to be taken. Incidents are documented via correspondence between the City and Contractor and in the Biosolids Progress meeting minutes, when applicable.

II. Emergency Response – General Safety Topics

The City and its Biosolids Contractor have developed and implemented emergency procedures to address a wide variety of potential scenarios, as described below:

Emergency Response Plan (ERP)

The ERP provides specific information to plant personnel for emergencies that could occur at the VCWRF. This includes response procedures for various types of emergencies, including but not limited to fires, chemical leaks, severe weather, and terrorism. The ERP provides a quick reference guide for procedures and actions that will be implemented to prepare for and in respond to emergency situations that are specific to Village Creek.

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Risk Management Plan (RMP)

The City of Fort Worth Water Department has developed a detailed facility risk management program. The RMP includes:

- Accidental Release Prevention Program (ARP Program) Management System
- Accidental Release Prevention Program Manual
- Offsite Consequence Analysis
- Hazard Review Report
- Chemical Spill Response Plan
- Emergency Response Plan – (for all Water Dept. Facilities)
- Village Creek WRF Emergency Response Procedures

Emergency Operations and Response Plan (EORP)

The Water Department has an Emergency Operations and Response Plan (EORP) in place to address emergencies specific to the department including activities within the biosolids value chain. The EORP provides guidance for preparedness and response to emergencies and contingencies involving water and wastewater treatment facilities.

Wastewater Procedures Manual

The Water Department's Field Operations Division maintains procedures associated with wastewater collection activities. These include items such as responding to sanitary sewer overflows and routine sewer line maintenance procedures.

Village Creek Water Reclamation Facility Emergency Response Procedures

Village Creek Water Reclamation Facility has detailed emergency response procedures (SOPs) which are a part of the ERP and RMP. These procedures provide detailed information and maps with regards to:

- Plant Evacuation – due to Chemical Leaks or Fire
- In-plant spills (hazardous materials and process sludges)
- Chemical Leaks
- Fire
- Severe Weather
- Notification of Authorities
- Chain of Authority (Contact Information)
- Emergency Equipment List
- Assembly Sites
- Chlorine Emergency Response Team
- Training requirements

VCWRF personnel are trained on emergency response procedures and the importance of coordinating response activities with other City Departments (Environmental Services Division of Transportation and Public Works, Police Department, Fire Department), state agencies (TxDOT and TCEQ), federal agencies, contractors, and other impacted entities. Emergency response procedures are regularly reviewed, updated and maintained as hard copies in the VCWRF Library and electronic network files.

Plant Security

The City provides trained security personnel to protect facilities and operations from physical attack, as specified in the Emergency Management Plan. The Water Department has developed specific roles and

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responsibilities for security guards at water and wastewater treatment facilities to protect sensitive infrastructure from contamination, trespass, vandalism, terrorism, active shooters and other threats.

Contractor Emergency Response Plans

The City requires contractors to provide Emergency Response Plans, as outlined in contract documents and service agreements. Contractors must provide qualified, properly-trained personnel that are able to follow established procedures and implement appropriate action plans in the event of an emergency. Required emergency response plans for contractors are listed in Table 11.1 below.

REFERENCES

- BMP Guidance Manual (NBP, June 2011)
- Code of Good Practice (NBP, June 2011)
- Manual of Good Practice for Biosolids (NBP, June 2011)
- Contractor SOP: “Spill Prevention, Control and Countermeasures Plan for Transportation of Biosolids”
- VCWRF SOPs

EMS Cross References:

- Element 4.0 Legal and Other Requirements
- Element 7.0 Roles and Responsibilities
- Element 8.0 Training
- Element 9.0 Communication and Public Outreach
- Element 12.0 Documentation and Document Control
- Element 14.0 Nonconformance: Preventative and Corrective Action

ATTACHMENTS

- Biosolids Contractor Incident Report

REVISION HISTORY

Revision #	Date	Revision Description
12	10/06/2021	Update to Procedures and Responsibilities Sections
11	03/31/2020	Update to Attachments section and Table 11.1
10	09/11/2018	Update to Responsibility section and Table 11.1
09	09/25/2017	Updated procedure and Emergency Preparedness and Response table
08	08/03/2016	Merged element to new format
07	08/05/2013	Updated references, added attachments list
06	07/29/2011	Update based on changes to Emergency Response SOP, correct typographical errors and update dates
05	05/15/2008	Audit (YR2) 2007
04	06/09/2007	Audit (YR1) 2006
03	05/26/2005	3 rd Party Audit Phase I Revisions
02	11/29/2004	2004 Issue
01	10/01/2004	Approval Draft
SR	01/30/2004	Issued for Status Review

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TABLE 11.1 — EMERGENCY PREPAREDNESS & RESPONSE



DOCUMENT	EMERGENCY/DESCRIPTION	DEPARTMENT/DIVISION	AREA(S) OF INFLUENCE WITHIN BIOSOLIDS VALUE CHAIN
City of Fort Worth Emergency Management Plan (EMP)	Operating Procedures and Emergency Response Plans for all City-related activities.	City Wide All Departments	<ul style="list-style-type: none"> Wastewater Pretreatment and Collection Wastewater Treatment and Solids Generation Solids Stabilization, Conditioning and Handling Solids Storage and Transportation Biosolids Use and Disposal
Security Guard Procedures at Water Plants	Operating Procedures for Security Guards	Water Department/All Divisions	<ul style="list-style-type: none"> Wastewater Treatment and Solids Generation Solids Stabilization, Conditioning and Handling
Fort Worth Water Department Emergency Operations and Response Plan (EORP) <ul style="list-style-type: none"> Evacuation Plan Vulnerability Analysis Emergency Numbers Duty Supervisor Emergency Equipment Inventory Critical System Records Industrial Waste Inventory and Monitoring System Emergency Operations Organizations Emergency Response Center Mutual Air Agreements Emergency Training Bench Reference Priority Checklist 	<ul style="list-style-type: none"> Personal Injury, Hazardous Gas Leak, Explosion or Other Catastrophic Event Fire or Explosion Chlorine Leak Power Loss High River Level (Flood) Tornado Civil Disorders Military Attack Personnel Abuse Blocked Access Communication Loss Equipment Failure Process Failure Unusual Raw Wastewater In-Plant Spills City Water Loss Service Water Loss Hot Water Loss Blizzard or Ice Storm Earthquake 	Water/Plant Operations (Field Operations)	<ul style="list-style-type: none"> Wastewater Collections
		Water/Customer Care (Pretreatment)	<ul style="list-style-type: none"> Wastewater Collections Wastewater Treatment
		Water/Plant Operations (Village Creek)	<ul style="list-style-type: none"> Wastewater Treatment & Solids Generation Solids Stabilization, Conditioning and Handling Solids Storage and Transportation
Village Creek Wastewater Water Reclamation Facility Comprehensive Vulnerability Assessment Required in 2002 by public law (PL 107-188). Ft. Worth conducted vulnerability assessment on VCWRF as well as all Water Plants.	All areas of the VCWRF	Water/Plant Operations (Village Creek)	<ul style="list-style-type: none"> Wastewater Treatment and Solids Generation Solids Stabilization, Conditioning and Handling

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DOCUMENT	EMERGENCY/DESCRIPTION	DEPARTMENT/DIVISION	AREA(S) OF INFLUENCE WITHIN BIOSOLIDS VALUE CHAIN
Wastewater Procedures Manual	<ul style="list-style-type: none"> • Backup and Flooded Buildings • Manhole Overflows and Run-Outs • Stops, Bad Odors, and Vermin 	Water/Plant Operations	<ul style="list-style-type: none"> • Wastewater Collections
SOP 07.001 – Liquid Sludge Spill Response	Procedures for responding to liquid sludge spills at Village Creek and the Dewatering Facility	Water/Plant Operations (Wastewater Operations or Biosolids & Safety)	<ul style="list-style-type: none"> • Wastewater Treatment and Solids Generation
SOP 07.002 – Liquid Sludge Spill Reporting	Procedures for reporting unauthorized discharges of liquid sludge	Water/Plant Operations (Wastewater Operations or Biosolids & Safety)	<ul style="list-style-type: none"> • Wastewater Treatment and Solids Generation
Village Creek – General Emergency Procedures	<ul style="list-style-type: none"> • Plant Evacuation – due to Chemical Leaks or Fire • In-plant spills (hazardous materials and process sludges) • Chemical Leaks • Fire • Severe Weather • Notification of Authorities • Chain of Authority (Contact Information) • Emergency Equipment List • Assembly Sites • Chlorine Emergency Response Team • Training requirements 	Water/Plant Operations	<ul style="list-style-type: none"> • Wastewater Treatment and Solids Generation
Contractor - Emergency Action Plan a. Emergency Evacuation Plan b. Spill Prevention Plan c. Severe Weather & Tornado Plan d. Contingency Plan for Flooding e. Backup Plan for Loss of Power	<ul style="list-style-type: none"> • Biosolids Spill • Safety Precautions and Programs Associated with Beneficial Use of Biosolids • Trinity River Floods • Mechanical Failures • Electrical Failure-(Emergency Generator) 	Biosolids Contractor:	<ul style="list-style-type: none"> • Solids Conditioning & Handling • Solids Storage and Transportation • Land Application • Dewatering/Processing sludge
Environmental and Transportation Safety Procedures	Safety Procedures for Handling Biosolids and General Transportation (Contractor SOPs)	Biosolids Contractor:	<ul style="list-style-type: none"> • Solids Conditioning & Handling • Solids Storage and Transportation • Land Application
Spill Prevention, Control, and Countermeasures Plan for Transportation of Biosolids	Biosolids and Oil Spill Prevention and Response (Contractor SOPs)	Biosolids Contractor:	<ul style="list-style-type: none"> • Solids Conditioning & Handling • Solids Storage and Transportation • Land Application

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Incident Report

(This report must be completed within 24 hours. Contact the Operations Manager immediately after the incident.)

Incident type: <small>(check more than one if necessary)</small>	<input type="checkbox"/> Non-injury	<input type="checkbox"/> Injury	<input type="checkbox"/> Close Call	<input type="checkbox"/> Accident	<input type="checkbox"/> Theft
	<input type="checkbox"/> Equipment Damage	<input type="checkbox"/> Vehicle Damage	<input type="checkbox"/> Utility Cut		

1. *INCIDENT REPORT IS TO BE COMPLETED BY THE SUPERVISOR*****

Print Name of Person involved: _____ Sex: M or F

Social Security No: _____ DOB: _____

Occupation: _____ Does the employee speak English? Y or N

Date of incident: _____ Time: _____ Supervisor: _____

Date when employee reported incident to supervisor: _____ Date reported to HR: _____

Job Address: _____	Incident Location: (where incident occurred) _____	Job No.: _____
_____	_____	_____
_____	_____	_____

Detailed description of incident: _____

Were photos taken of damage? Y or N Was employee performing regular job duties when incident occurred? Y or N

Equipment/Tools/Vehicle involved: _____ I.D. # _____

Utility Damage: Y or N Type: _____
(Example: Water, Gas, Electric, etc.)

Nature of Injury: _____ Part of Body Injured or Affected: _____
(Example: Strain, Cut, Broken arm)

What was the employee doing just before the incident occurred?
(Example: "climbing ladder while carrying roofing materials," "laying pipe in trench" or "spraying paint from hand sprayer")

Treatment: First Aid (on site) _____ Medical (doctor) _____ Date of doctor visit: _____

Time of Dr. visit? _____ Did employee return to work? Y or N Date: _____

Name of supervisor/foreman who transported employee to clinic? _____

The name of facility where treatment was provided: _____

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*Refusal of Medical Treatment: Y or N If refusing medical treatment, explain: _____

*Although an employee refuses medical treatment our policy states, "A drug and alcohol screen will be administered following an on-the-job injury requiring treatment from a physician, or following an accident or incident, including near misses." Therefore, a DRUG & ALCOHOL TEST MUST be administered. A supervisor or foreman shall transport the employee to the clinic for the post-accident screening.

This section to be completed by employee

Employee statement: _____

Check here if statement is on a separate form.

Employee's signature: _____ Date: _____

This section to be completed by Witness

Statement: _____

Witness signature: _____ Date: _____

If not an employee, please provide contact phone number: _____

Use a separate sheet if more than one witness.

Supervisor's statement: _____

Corrective action taken to prevent future occurrences (completed by supervisor):

Supervisor's signature: _____ Date: _____

Print your name: _____

I agree with the Incident Report and will follow the corrective action as stated above:

Employee signature: _____ Date: _____

- **Incident reports must be turned in to HR office within 24 hours of incident**
- **Contact the Operations Manager immediately after incident and contact Human Resources immediately for medical authorization if the Operations Manager is not available**
- **Operations Manager is also available during pm hours and/or weekends**