

**CLOSED**

SECTION 1: Complete, with exception of Block 1, prior to providing draft of work to the Work Control Specialists.

1. Work Control Number: VFS-98458-WIP 4. Location: VIT  
 2. Originator's Name/ext: Howard Payne 5. System: 63I  
 3. Labor Charge Number: WH5210004 6. Equipment No.: V-011 7. Quality Level: C  
 8. Title: Addition of Caustic to the CFMT  
 9. Scope: SEE ATTACHED

SECTION 2: Complete prior to providing draft to reviewers.

10. Requirements Screen: Check appropriate block below to indicate if item is applicable.  
 NO YES Action Required If "YES" DEC 19 2003

10a. Hazards Analysis	<u>X</u>	Attach Form <u>WV-3909</u> per <u>WV-921</u> . Obtain required review.
10b. RWP	<u>X</u>	Record RWP number prior to commencing work. RP review required.
10c. IWP	<u>X</u>	Record IWP number prior to commencing work.
10d. ECN	<u>X</u>	Record ECN Number.
10e. TM	<u>X</u>	Record TM Number.
10f. GDP	<u>X</u>	Enter GDP number and attach Form <u>WV-3522</u> .
10g. Confined Space Entry	<u>X</u>	Attach Form <u>WV-3035</u> . IH&S review required.
10h. Non-Routine/Critical Lift	<u>X</u>	Attach Form <u>WV-2171</u> . QA and IH&S review required.
10i. Welding	<u>X</u>	Attach Form <u>WV-1888</u> . QA review required.
10j. Waste generated	<u>X</u>	Record Waste Profile Number. Complete Appendix B of <u>SOP 300-07</u> . WMS and EA review required.
10k. ALARA trigger levels exceeded	<u>X</u>	Attach Form <u>WV-2404</u> & Form <u>WV-2481</u> , if applicable. RP review required.
10l. HLW	<u>X</u>	HLW Process & WQR Compliance Engineering and QA review required.
10m. Pre-Job Brief	<u>X</u>	Attach Form <u>WV-3745</u> .

11. Walkdown Complete: (WGS' Signatures/Date) [Signature]

12. Estimated/Actual Labor Hours: PSO 8 / 8 DDWO 1 QA 1 RC Tech 1 IH&S Tech 1  
 Maint E 1 Maint I 1 Maint M 1 RHWF 1 Other 1

SECTION 3: To be completed prior to commencement of work.

13. Reviewers: Check boxes below indicating if review required.  
 (Signature/Date)

<input checked="" type="checkbox"/> Peer Reviewer <u>M. J. Agnew</u> 12/16/03	<input checked="" type="checkbox"/> PSO <u>[Signature]</u> 12-18-03
<input checked="" type="checkbox"/> CM <u>[Signature]</u> 12/16/03	<input checked="" type="checkbox"/> QA <u>[Signature]</u> 12/18/03
<input type="checkbox"/> SE	<input checked="" type="checkbox"/> RP <u>[Signature]</u> 12-18-03
<input type="checkbox"/> DDWO	<input checked="" type="checkbox"/> WMS <u>[Signature]</u> 12/18/03
<input checked="" type="checkbox"/> EA <u>[Signature]</u> 12/18/03	<input type="checkbox"/> Other (List)
<input checked="" type="checkbox"/> IH&S <u>[Signature]</u> 12/18/03	<input type="checkbox"/> Other (List)
<input type="checkbox"/> Maint	<input checked="" type="checkbox"/> Orig <u>[Signature]</u> 12/18/03

14. Is a USQD (USQP Form WV-3306, Sections V, VI and VII) required? Yes No  
[Signature] (USQD Originator or Safety Analyst Signature) Chuck Curtis (Printed Name) 12-17-03 (Date)

If Yes, attach the completed USQD (USQP Form WV-3306, Sections V, VI and VII).

15. Approval: (Signature/Date) [Signature] 12/18/03  
 Signature indicates approval of WIP and agreement that all affected parties have reviewed and approved.

SECTION 4: To be completed upon completion of work or cancellation of WIP. (Attach lessons learned, if applicable, to WIP.)

16. Work Completion Documentation: (Signature/Date) Lessons Learned Yes No Check if WIP Canceled: No  
 WGS [Signature] Date 12/29/03 Orig [Signature] Date 1/5/04

17. WIP Closed: Work Control (Signature/Date) [Signature] 1/7/04

TITLE <u>Caustic Addition to CFMT</u>		PAGE <u>    </u> OF <u>    </u>
TASK	DESCRIPTION	SIGNATURE/DATE
1.0	<b>GENERAL INFORMATION</b>	
1.1	<b>PURPOSE</b>	
	This WIP provides instructions for adding a 55 gallons of a 50% sodium hydroxide (NaOH) solution to the CFMT from the Middle West Operating Aisle (MWOA) and then flushing the drum and associated transfer lines to the CFMT using utility water.	
1.2	<b>SCOPE</b>	
	<p>FOLLOWING IS A WORK SCOPE SUMMARY THAT WILL BE COMPLETED BY THIS WORK ORDER:</p> <p>A) A 55 gallon drum of 50% concentration NaOH will be obtained from the warehouse and transferred the MWOA for use.</p> <p>B) A drum transfer pump will be obtained from warehouse stock (0213-003.0) and also transferred to the same location.</p> <p>C) The transfer line (6-CH-1/2-0120) will be verified as isolated at both ends (the end where the line enters the cell in the Lower WOA, as well as where the pump will be connected in the MWOA.)</p> <p>D) The pump will be installed in the drum and then connected to the transfer line. With the valves opened, the pump will be started and transfer made.</p> <p>E) Provisions will be made to then flush the drum and associated transfer piping, also to the CFMT.</p> <p>F) Upon completion of transfer and flushing, the line and valving will be returned to it's original configuration.</p> <p>G) Tank level and density will be recorded for information before and after the transfer and flush.</p>	
2.0	<b>PRECAUTIONS/LIMITATIONS</b>	
2.1	Steps in these instructions shall be completed in the order described to ensure that material flows into the cell only.	
3.0	<b>PREREQUISITES</b>	
3.1	<b>PERFORMANCE DOCUMENTS</b>	
	<p>Associated IWP# 2003-00-4942</p> <p>Associated RWP# 2003-003</p> <p>WV-3909, "HAZARDS SCREEN CHECKLIST"</p>	
3.2	<b>MATERIAL/SPECIAL TOOLS AND EQUIPMENT</b>	

TASK	DESCRIPTION	SIGNATURE/DATE
	<p>A) 55 gallon drum of NaOH - 50% concentration (whse. Stock no. 0034-006.0)</p> <p>B) Drum pump suitable for transferring caustic from 55 drum thru transfer lines and to the CFMT (whse. Stock no. 0213-003.0)</p> <p>C) Drum lifting/rolling devices to assist in transferring the drum</p> <p>D) Associated clamps or fittings necessary to connect the pump to the transfer line</p>	
3.3	<b>FIELD PREPARATIONS (MAY BE COMPLETED OUT OF SEQUENCE)</b>	
	A) Obtain NaOH, transfer pump with necessary fittings, and transport to working location in the MWOA	
4.0	<b>PERFORMANCE SECTION</b>	
+ 4.1	Prior to the addition and flushing, record tank level <u>33.9</u> and density <u>1.05</u> from CFMT read out in Vit control room. (Prior to starting agitator)	PSO <i>PSO</i>
+ 4.2	PSO: Verify the following valves are in the closed position: 6 CH-H-900 Ball isolation valve upstream of hose connection 6-CH-HC-902 (pump tie in location in MWOA) 6 CH-H-901 Ball isolation valve down stream of the hose connection (MWOA) 6 CH-H-944 Cell Wall Isolation valve (LWOA)	PSO <i>PSO</i>
4.3	Consistent with PPE as described in the IWP, open NaOH drum and install pump in preparation for tie in to transfer line.	
+ 4.4 RP HOLDPOINT	RP Tech: GM survey line in MWOA where breach to install pump will occur to verify <100 cpm/probe beta-gamma above background on line. If activity above this is detected, stop operations until additional controls can be put in place.	<100 cpm/probe beta-gamma above bkg. <i>[Signature]</i> RP TECH 12/21/03
4.5	Verify absence of pressure (gage on pressure pot) and disconnect pressure pot from transfer line at hose connection 6-CH-HC-902 (upstream of valve 6 CH-H-901) and connect transfer pump.	
4.6	Verify CFMT off gas blower is operating	
4.7	Start CFMT agitator (63-K-001)	
4.8	Open valve 6 CH-H-944 and valve 6 CH-H-901 and turn on pump to begin transfer.	

TASK	DESCRIPTION	SIGNATURE/DATE
4.9	Upon completion of caustic transfer, triple flush drum (approximately 10 gallons each flush), pump, and associated piping to the CFMT using utility water.	
4.10	Upon completion of flushing, secure pump in the off position and close valves 6 CH-H-944 and 6 CH-H-901.	
4.11	Allow tank agitator to run for ½ hour and secure in the original (off) condition.	
4.12	Line originally breached for transfer to be reconnected and valves 6 CH-H-900, 6 CH-H-901, and 6 CH-H-944 returned to their original closed position. Drum moving equipment, empty drum, pump, any additional items used, returned to proper location.	
+ 4.13	Upon completion of addition and flushing, record tank level <u>34.2</u> and density <u>1.135</u> from CFMT read out in Vit control room. (agitator off)	PSO <i>mark</i> 12/21/03
5.0	POST MAINTENANCE TESTING	
5.1	NONE REQUIRED	
6.0	POST COMPLETION CONFIGURATION	
+ 6.1	Same as prior to starting	PSO <i>mark</i> 12/21/03

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# HAZARDS SCREEN CHECKLIST

Project/Document ID:	WIP #	CFMT Caustic Addition	Rev.	0	FC#	0
Hazards Analyst:			Howard Payne			
			Date: 12/15/03			

If the answer to any of the following questions in "Yes," consult the Hazard Control Specialty Area indicated in the right-hand column for assignment of a Hazards Controls Specialist. Screening of a field change needs to address only the impact of the field change on the original Hazards Screen Checklist.

## Hazard Control Specialty Areas Acronyms

CSE - Criticality Safety Engineer  
 EA - Environmental Affairs  
 EM - Emergency Management  
 FM - Facility Manager  
 FP - Fire Protection

IH&S - Industrial Hygiene & Safety  
 MPOSS - Main Plant Operations Shift Supervisor  
 RP - Radiation Protection  
 USQD Orig - USQD Originator  
 WMS - Waste Management Services

**YOU SHALL CONSIDER BOTH NORMAL OPERATIONS AND PROCESS UPSET CONDITIONS.**  
 Sheet 1 of 4

#	Yes	No	Potentially Hazardous Situations	Cog. Function
<b>Radiological and Utilities</b>				
1a	X		Will the work be performed in a radiologically posted area, i.e., radiological buffer area, radiation area, high radiation area, contamination area, etc.?	RP
1b		X	Will the work involve high-activity sealed radioactive sources?	RP
1c		X	Will the work involve any type of excavation or ground intrusion (e.g., driving posts, installing Hilti bolts)? (See WV-370; use Form WV-3521.)	RP, IH&S
1d		X	Will the work involve any type of construction, remodeling, or demolition?	RP, IH&S
1e		X	Will the work be conducted on equipment containing radiation detectors?	RP
1f	X		Will the work involve systems or vessels containing Highly Radioactive Waste?	RP
<b>Chemical</b> Note: Obtain and review Material Safety Data Sheets for all chemicals involved.				
2a		X	Will toxic, carcinogenic, flammable, or reactive chemicals be involved (either used, e.g., lead paint, PCBs, or generated, e.g., wastes)?	IH&S, EM, EA
2b	X		Will corrosive or oxidizing chemicals other than water be used or generated?	IH&S
2c		X	Will compressed or uncompressed gases in cylinders or bottles or cryogenics be involved, e.g., halon in cylinders?	IH&S
2d		X	Will the work involve piped-in chemicals, chemical sensors, or equipment or piping containing chemicals?	IH&S
2e		X	Will the work involve Trade/Brand name chemicals that do not list all the ingredients on the MSDS?	IH&S, EM, EA
2f		X	Will the work involve the purchase of new or increase an existing inventory level of chemicals?	IH&S, EA, EM, WMS

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**YOU SHALL CONSIDER BOTH NORMAL OPERATIONS AND PROCESS UPSET CONDITIONS.**

Sheet 2 of 4

#	Yes	No	Potentially Hazardous Situations	Cog. Function
<b>Fire and Explosion</b>				
3a		X	A. Will an open flame be used or produced?	IH&S, FP
3b		X	B. Will a heat source greater than 100°C be used, produced, or located in close proximity to the work?	IH&S, FP
3c		X	C. Will the work involve or require disabling a fire alarm or protection system?	IH&S, FP, MPOSS
<b>Safety Basis</b> <span style="float: right;">Note: This question is intended to trigger the early involvement of a USQD Originator and does <u>not</u> replace the USQP required by WV-914.</span>				
4a		X	Will the work involve any changes to facilities or procedures as described in a safety analysis or involve tests or experiments?	USQD Orig
<b>Emergency Preparedness</b>				
5a		X	Will the work disable the 812-all-page system, the 222-plant-page system, or the sheltering alarm? (See SOP 00-04; use Form WV-2164.)	EM, MPOSS
5b		X	Will the work disable the meteorological tower or instrumentation?	EA, EM, MPOSS
5c		X	Will the work block or render inaccessible any emergency access or emergency relocation routes or assembly areas?	EM, MPOSS
5d		X	Will the work affect the ability to respond to an emergency at an adjacent facility?	EM, MPOSS
5e		X	Will the work involve maintenance on or temporary or permanent relocation or disablement of emergency response equipment?	EM, MPOSS
5f		X	Will the work require the development of new or a change to existing emergency management postings, signs, or instructions (e.g., relocation route postings, assembly area maps, or ventilation or sheltering instructions)?	EM
5g		X	Will the work directly or indirectly affect the operability of the Emergency Operations Center's (EOC's) or the Technical Support Center's (TSC's) facility or equipment?	EM, MPOSS
<b>Environmental, Waste Minimization, Pollution Prevention, and Regulatory</b>				
6a		X	Will the work potentially result in any airborne releases (e.g., smoke, fumes, gases, exhaust, asbestos, dust, mercury, radioactive material)?	EA
6b		X	Will the work potentially result in any liquid releases (e.g., water, petroleum products, mercury, chemicals) into the environment?	EA
6c	X		Will the work produce any waste products (e.g., industrial waste, hazardous waste, mixed waste, radioactive waste) or involve the on-site or off-site transportation of any waste products?	WMS, EA
6d		X	Will the work result in changes to the site storm water drainage system (e.g., changes to drainage pathways/patterns) or result in removal of established vegetative ground cover or exposure of soil to rain/snowfall?	EA
6e		X	Will the work result in the siting of new structures, the relocation, demolition, or removal of existing structures, or modifications to existing structures (e.g., removing a tank or adding floor space to a building)?	EA

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**YOU SHALL CONSIDER BOTH NORMAL OPERATIONS AND PROCESS UPSET CONDITIONS.**  
**Sheet 3 of 4**

#	Yes	No	Potentially Hazardous Situations	Cog. Function
6f		X	Will the work disable or be performed in close proximity to any environmental monitoring equipment (i.e., air monitors, groundwater wells, etc.)?	EA
6g		X	Will the work require the disturbance of migratory bird nests or involve animal control?	EA
6h		X	Will the work involve PCB items in use (e.g., transformers, capacitors, voltage regulators), PCB wastes, or the removal or abandonment of pipes that distribute natural gas?	EA
6i		X	Will the work potentially affect wetlands, the flow of creeks or streams, or lake discharges?	EA
6j		X	Will the work require special packaging accommodations for waste including application of fixative or foaming agent?	WMS, EA
<b>Equipment Status</b> * Facility Manager shall decide whether the Radiation and Safety Committee must review the proposed activity pursuant to <u>WV-906</u> .				
7a		X	Will the work involve removing Process Safety Requirement (PSR) controlled equipment from service? (See <u>WVDP-218</u> .)	FM *
7b		X	Will the work be performed on equipment identified in any Process Safety Requirement? (See <u>WVDP-218</u> .)	FM *
7c		X	Will the work be performed on or disable Safety Class A, B, or C equipment? (See <u>WVDP-204</u> .)	FM *
7d		X	Will the work be performed on ventilation systems or air effluent monitoring systems?	FM *
7e		X	Will the work impair the operability of or have the potential to inadvertently actuate any alarm (e.g., fire detection, fire suppression, carbon monoxide, NOx, ammonia) system?	FM *, IH&S, MPOSS
7f		X	Will the work be performed on any standby or backup power supply? (See <u>SOP 00-04</u> , Appendix E.)	FM *
7g		X	Will the work impair any breathing air supply or fresh air intake?	FM *
<b>Industrial Hygiene and Safety, Emergency Management and Construction Safety</b>				
8a		X	Will the work be performed on open-sided platforms or roofs more than 4 feet above ground level or more than 6 feet up on a ladder?	IH&S
8b		X	Will the work require designing and/or building a permanent fall-protection system for other than field or construction use?	IH&S
8c		X	Will the work require burning, welding, or grinding or involve forms of high energy (e.g., electrical, steam, high-pressure air, or water)?	IH&S
8d		X	Will the work require entry into a confined space?	IH&S
8e		X	Will the work produce a breathing hazard (dust, fumes, solvent vapors, etc.) requiring use of respiratory protection for non-radiological purposes?	IH&S
8f		X	Will the work require handling asbestos or insulation-containing materials?	IH&S
8g		X	Will the work be conducted on or near live electrical components with more than 50 volts alternating current (VAC)?	IH&S
8h		X	Could the work or job location result in "heat" or "cold" injuries such as heat exhaustion, frost bite, or hypothermia?	IH&S
8i		X	Will the work produce noise greater than 85 dBA at the job site or at other locations?	IH&S

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**YOU SHALL CONSIDER BOTH NORMAL OPERATIONS AND PROCESS UPSET CONDITIONS.**  
**Sheet 4 of 4**

#	Yes	No	Potentially Hazardous Situations	Cog. Function
8j	X		Will the work produce paint or chemical fumes at the job site or at other locations?	IH&S
8k		X	Will the activity involve manual lifting of materials, power tools, vibrating equipment, or repetitive motions that could cause musculoskeletal injury?	IH&S
8l	X		Will the work involve hoisting and/or rigging activities?	IH&S
8m		X	Will the work result in the temporary or permanent routing of utilities (e.g., electricity, air, gas, steam, water, gasoline, fuel oil) that may become damaged as a result of exposure to personnel or vehicular traffic?	IH&S
8n		X	Will the work result in the temporary or permanent routing of utilities (e.g., electricity, air, gas, steam, water, gasoline, fuel oil) that may unintentionally become covered in some manner by material (e.g., snow, water, sand, dirt, gravel, mud, boxes, containers)?	IH&S
8o		X	Will the work breach a system known or suspected to contain hazardous materials (e.g., mercury) or energy sources (e.g., steam, electricity)?	IH&S
8p		X	Will the work be performed in an area where previous spills of hazardous materials (e.g., mercury) are known or suspected to have occurred?	IH&S
8q		X	Will the work involve conditions where the unexpected energization or startup of machines or equipment or the release of stored energy could cause injury or death to personnel? (See SOP 00-04.)	FM
<b>Nuclear Criticality</b>				
9a		X	Will the work involve or potentially involve greater than 1 gram of fissionable material (e.g., U-233, U-235, Pu-239, Pu-241)?	CSE
9b		X	Will the work involve spent fuel handling outside an approved shipping container?	CSE
9c		X	Will the work involve storage of fissile material in a container other than described in PSR-6 or PSR-18?	CSE
9d		X	Will the work impact any fissionable material contained in the GPC, PMC, XC-1, XC-2, or PPC?	CSE
9e		X	Will the work involve handling or placement of containers within the storage racks in the CPC?	CSE

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# Puritan Products, Inc.

2290 Avenue A, Bethlehem, PA 18017  
P.O. Box 796602, Dallas, TX 75379

Phone 610-866-4225  
Phone 972-596-6640

Fax 610-866-4270  
Fax 972-612-2956



EMERGENCY PHONE:  
610-866-4225

CHEMTREC: (24 HR)  
800-424-9300

## Material Safety Data Sheet

March 31, 1998

### 1. Product Identification: SODIUM HYDROXIDE SOLUTIONS (10%-60%)

Synonyms: Caustic soda solution; lye solution; sodium hydroxide liquid; sodium hydrate solution, Sodium Hydroxide  
CAS No: 1310-73-2  
Molecular Weight: 40.00  
Chemical Formula: NaOH in water

### 2. Composition/Information on Ingredients

<u>Ingredient</u>	<u>CAS No</u>	<u>Percent</u>	<u>Hazardous</u>
Sodium Hydroxide	1310-73-2	10 - 60%	Yes
Water	7732-18-5	40 - 90%	No

### 3. Hazards Identification

#### Emergency Overview

POISON! DANGER! CORROSIVE. MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED. CAUSES BURNS TO ANY AREA OF CONTACT. REACTS WITH WATER, ACIDS AND OTHER MATERIALS.

#### Potential Health Effects

##### Inhalation:

Severe irritant. Effects from inhalation of mist vary from mild irritation to serious damage of the upper respiratory tract, depending on severity of exposure. Symptoms may include sneezing, sore throat or runny nose. Severe pneumonitis may occur.

##### Ingestion:

Corrosive! Swallowing may cause severe burns of mouth, throat, and stomach. Severe scarring of tissue and death may result. Symptoms may include bleeding, vomiting, diarrhea, fall in blood pressure. Damage may appear days after exposure.

##### Skin Contact:

Corrosive! Contact with skin can cause irritation or severe burns and scarring with greater exposures.

##### Eye Contact:

Corrosive! Causes irritation of eyes, and with greater exposures it can cause burns that may result in permanent impairment of vision, even blindness.

##### Chronic Exposure:

Prolonged contact with dilute solutions or dust has a destructive effect upon tissue.

##### Aggravation of Pre-existing Conditions:

Persons with pre-existing skin disorders or eye problems or impaired respiratory function may be more susceptible to the effects of the substance.

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#### 4. First Aid Measures

##### Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

##### Ingestion:

DO NOT INDUCE VOMITING! Give large quantities of water or milk if available. Never give anything by mouth to an unconscious person. Get medical attention immediately.

##### Skin Contact:

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician, immediately. Wash clothing before reuse.

##### Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

##### Note to Physician:

Perform endoscopy in all cases of suspected sodium hydroxide ingestion. In cases of severe esophageal corrosion, the use of therapeutic doses of steroids should be considered. General supportive measures with continual monitoring of gas exchange, acid-base balance, electrolytes, and fluid intake are also required.

#### 5. Fire Fighting Measures

##### Fire:

Not considered to be a fire hazard. Hot or molten material can react violently with water. Can react with certain metals, such as aluminum, to generate flammable hydrogen gas.

##### Explosion:

May cause fire and explosions when in contact with incompatible materials.

##### Fire Extinguishing Media:

Use any means suitable for extinguishing surrounding fire. Adding water to caustic solution generates large amounts of heat.

##### Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

#### 6. Accidental Release Measures

Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment as specified in Section 8. Contain and recover liquid when possible. Do not flush caustic residues to the sewer. Residues from spills can be diluted with water, neutralized with dilute acid such as acetic, hydrochloric or sulfuric. Absorb neutralized caustic residue on clay, vermiculite or other inert substance and package in a suitable container for disposal. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

#### 7. Handling and Storage

Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities. Store above 16C (60F) to prevent freezing. Always add the

# 03-4942  
(Current year and Number)

P50  
Work Group

# IWP

## INDUSTRIAL WORK PERMIT

WVNSCO Job Supervisor is Responsible for Issuing IWP.

### NOTE:

Activities in Sections 10-21 REQUIRE Review by  
IH&S

## WVDP PHONE NUMBERS

SAFETY - EXT. 2345/4681  
SECURITY - EXT. 4330/4288  
NURSE - EXT. 4017  
PLANT SYSTEMS SUPERVISOR - EXT. 4239  
PLANT PAGE - EXT. 222 | AOC - EXT. 223

IN CASE OF EMERGENCY  
USE PLANT ALL PAGE  
EXT. 812

IWP MUST BE AVAILABLE AT JOB SITE

TO BE FILLED OUT BY WORK GROUP SUPERVISOR

NOTE: WHEN JOB COMPLETE, RETURN IWP TO WORK PACKAGE --- IF NONE, RETURN IWP TO WORK GROUP SUPERVISOR.

Date: 12-21-63  
WIP # 98458 PO # \_\_\_\_\_ SOP # \_\_\_\_\_ OTHER: \_\_\_\_\_  
BUILDING/AREA VIT WORK GROUP/Sub-K: \_\_\_\_\_  
NATURE OF WORK: ADD CAUSTIC TO CFAT PERSON IN CHARGE: PSO 53  
WVNSCO COG ENGR.: \_\_\_\_\_  
WHEN COMPLETED AND SIGNED, IWP VALID UNTIL: 12/31/03 UPDATED TO: \_\_\_\_\_ BY: \_\_\_\_\_  
UPDATED TO: \_\_\_\_\_ BY: \_\_\_\_\_

1. ☐ N/A LINE BREAKING, NON-HAZARDOUS FLUID OR VENTILATION  
Material suspected in line \_\_\_\_\_ ☐ Automatic actuators negated  
☐ Line drained and checked ☐ Steam or electrical tracing shut off  
☐ Valves/dampers closed ☐ Area roped off, signs posted  
☐ Pump/fan controls "OFF" ☐ Shower/eyewash or water available  
☐ Above locked, tagged, tried ☐ Joint to be sheather to prevent spray
2. ☒ N/A ELECTRICAL WORK (Including troubleshooting, work NEAR energized components, & LIVE work <50 volts)  
☐ Troubleshooting Per SOP 00-11 ☐ Lock & Tag Per SOP 00-04
3. ☒ N/A LADDER WORK LADDER: ☐ STEP ☐ EXTENSION ☐ AERIAL DEVICE (Harness & Lanyard Required)  
☐ Footing Stable ☐ Safety Feet ☐ Angle Correct ☐ Ladder Tied Off ☐ Held By Assistant  
NOTE: If 3 point contact not maintained, positioning harness and lanyard required.
4. ☒ N/A NEGATIVE ENVIRONMENTAL FACTORS: ☐ Frostbite ☐ High Wind ☐ Thunderstorm ☐ Ice  
☐ Slippery Surfaces Specify PPE/Precautions as appropriate below.
5. ☒ N/A HOISTING/RIGGING (NON-CRITICAL LIFT): MOBILE CRANE WORK ☐ FORKLIFT ☐ HOIST OR FIXED CRANE ☐  
☐ Safety Hook ☐ Functional Load Inspection Required ☐ Tag Line(s)  
☐ Signaler must use orange vest, gloves or orange hard hat. NOTE: Slings and Hooks must have valid Inspection Tag
6. ☒ N/A CONSTRUCTION AND DEMOLITION CONTINUOUS HOUSEKEEPING & AREA POSTING REQUIRED  
HEAVY EQUIP. ☐ Control Traffic ☐ Back-Up Alarms ☐ Operator Seatbelts  
☐ Spotter for Overhead Power Lines - or - Limited Visibility Moves ☐ Pedestrian Safety \_\_\_\_\_  
POWDER ACTUATED TOOLS: ☐ Current Mfg. Certification ☐ Notify Nearby Workers ☐ Notify Security
7. ☒ N/A GROUND DISTURBANCE (Trenching, Driving Posts, Drilling into Concrete on grade - ETC.)--Required Ground Disturbance Permit (GDP).
8. PERSONAL PROTECTIVE EQUIPMENT (PPE) REQUIRED Only Check PPE Needed  
☐ Hard Hat ☐ Boots ☐ Orange Vest ☐ Weld Gear - Helmet & Lens  
☐ Face Shield ☐ Coveralls ☒ Gloves Rubber Leather: ☐ Gloves ☐ Sleeves  
☒ Goggles ☐ Disposable Suit ☐ Hearing Protection ☐ Other \_\_\_\_\_  
☒ Safety Glasses ☐ Level \_\_\_\_\_ Chem Suit ☐ Knee Protectors ☐ Flame Retardant Outer Garment  
☐ Rain Gear ☒ Safety Toe Shoes ☐ Harness & Line  
☐ Respiratory Protection see section 20 ☐ Personal Fall Arrest System
9. Other Protective Measures: ☐ Fire Watch - Post Watch Period \_\_\_\_\_ min  
☐ GFCI ☐ Safety Watch ☐ Barricades with signs/posts ☐ BZA Sampler  
☐ Lock & Tag Protection SOP 00-04 ☐ Fire Extinguisher: Type \_\_\_\_\_ ☐

PRECAUTIONARY REMARKS:

NOTE: NOTIFY AREA SUPERVISOR DAILY OF JOB ACTIVITY

WHEN JOB COMPLETE, RETURN IWP TO WORK PACKAGE -- IF NONE, RETURN IWP TO IH&S.

NOTE: The Following Tasks REQUIRE IH&S Review and Signature

10. ☒ N/A UNPROTECTED ROOF/WORKING SURFACE (>4') --NOTE--REQUIRED IH&S REVIEW AND SIGNATURE  
( ) SAFETY MONITOR - FALL PROTECTION PLAN ATTACHED Safety Monitor(s): \_\_\_\_\_
11. ☒ N/A SCAFFOLD WORK - Initial inspection (IH&S) By: \_\_\_\_\_
12. ☒ N/A EXCAVATIONS (>4') NOTE: CONSULT IH&S FOR HAZARDOUS ATMOSPHERE CHECK PER 29CFR 1926.651(g)(i).  
( ) Sloping/Benching (Max = 34° from Horizontal) LOCATION \_\_\_\_\_ DEPTH \_\_\_\_\_  
( ) Shoring, Shielding and Other Protective Systems \_\_\_\_\_  
( ) Atmospheric Testing BARRICADES: ( ) Visual ( ) Protective ( ) Signs  
( ) Underground Utilities Located ( ) Ladders within 25 feet of workers  
( ) Registered Professional Engineer Design/Review NOTE: GROUND DISTURBANCE PERMIT Required, see section 7.
13. ☒ N/A HOISTING/RIGGING (CRITICAL LIFT) PER WVDP-082:MOBILE CRANE WORK ( ) FORKLIFT ( ) HOIST OR FIXED CRANE ( )  
( ) Safety Hook ( ) Functional Load Inspection Required ( ) Tag Line(s)  
( ) Signaler must use orange vest, gloves or orange hard hat. NOTE: Slings and Hooks must have valid Inspection Tag
14. ☒ N/A WORK WITH POTENTIAL ASBESTOS CONTAINING MATERIAL AND/OR INSULATION WORK  
( ) ASBESTOS SAMPLING/REMOVAL ( ) WORK WITH INSULATION MATERIAL - TYPE: \_\_\_\_\_
15. ☒ N/A SAFETY SYSTEM IMPAIRMENTS ( ) Date/Time System Out of Service \_\_\_\_\_  
( ) Fire Pumps ( ) Water Supply ( ) Sprinkler Systems V# \_\_\_\_\_ ( ) Ventilation System  
( ) Alarms ( ) Emergency Power ( ) Breathing Air Supply ( ) ALL PAGE ( ) Other \_\_\_\_\_  
REQUIRED NOTIFICATIONS: ( ) MPO Shift Supervisor ( ) Security ( ) VOSS ( ) Rad Tech Supervisor
16. ☒ N/A BURNING, WELDING, AND GRINDING. OBTAIN "HOT WORK PERMIT" PER SOP 00-44 FROM IH&S
17. ☒ N/A CONFINED SPACE ENTRY per WV-925 OBTAIN Confined Space Entry Permit FROM IH&S
18. ☒ N/A HAZARDOUS MATERIAL/WASTE HANDLING ( ) Lead ( ) Mercury ( ) Paint ( ) Other Chemical ID: Sodium Hydroxide  
HANDLING EQUIPMENT REQUIRED: ( ) DRUM/CYLINDER CART ( ) FORK LIFT TRUCK ( ) SECONDARY CONTAINER  
( ) Portable Fire Extinguisher: Type: \_\_\_\_\_ ( ) Special Packaging/Container Required  
( ) Emergency Shower/Eyewash Required ( ) Spill Clean Up Material Required  
☒ MSDS included in work package ( ) Label Secondary Container (Product Name, Warnings, etc.)  
NOTE: BEFORE DISCARDING OR ABANDONING ANY OF THE ABOVE MATERIALS, CONSULT OP 300-07.
19. ☒ N/A LIVE ELECTRICAL WORK (Work ON energized components >50 volts)  
NOTE: WVNS Energized Work Permit, per SOP 00-11, must be completed.
20. ☒ N/A RESPIRATORY PROTECTION: (per IH&S) Exposure: (Estimated) (Measured) \_\_\_\_\_  
( ) Half Face Filter Respirator\* Cart. No. \_\_\_\_\_ ( ) Full Face\* Cart. No. \_\_\_\_\_  
( ) Supplied Air Cart. No. \_\_\_\_\_ ( ) PAPR Cart. No. \_\_\_\_\_ ( ) SCBA
21. ☒ N/A HEAT STRESS ( ) Cooling Vest ( ) % \_\_\_\_/\_\_\_\_ Work Rest Regimen ( ) Extra Fluids \_\_\_\_\_
22. PRECAUTIONARY REMARKS: \_\_\_\_\_ NOTE: NOTIFY AREA SUPERVISOR DAILY OF JOB ACTIVITY  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
23. Worker Feedback on Job Safety: (Notify Supervisor or IH&S)  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

#

## (Current year and Number)

ALL WORKERS ASSIGNED TO THIS JOB MUST SIGN BELOW OR ON ATTACHED COPY OF THIS PAGE

Workers Assigned to this job verify, by their signature, that they have been briefed, are aware of the job hazards, and will comply with the IWP requirements for personal protective equipment and applicable precautions:

NAME: Paul 10570 12-21-03  
SIGNATURE BADGE # DATENAME: \_\_\_\_\_  
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SIGNATURE BADGE # DATENAME: \_\_\_\_\_  
SIGNATURE BADGE # DATE

JOB SUPERVISOR/COGNIZANT ENGINEER/FIELD ENGINEER verifies by signature that the workers assigned to this job have been briefed on the scope of work, job hazards, and safety requirements.

SIGNATURE/BADGE # Steve MCP 11021 DATE 12-21-03

AREA SUPERVISOR verifies by signature that he/she is fully cognizant of this job's scope of work and safety requirements as they apply to his/her area of responsibility.

SIGNATURE/BADGE # Steve MCP 11021 DATE 12-21-03

( ) N/A IH&amp;S verifies by signature that they made every reasonable effort to ensure worker safety for this job.

SIGNATURE/BADGE # P. Rendy 10372 DATE 12/22/03