

STATE OF MISSOURI  
**DEPARTMENT OF NATURAL RESOURCES**

MISSOURI CLEAN WATER COMMISSION



**MISSOURI STATE OPERATING PERMIT**

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92<sup>nd</sup> Congress) as amended,

Permit No. MO-0002453

Owner: Expert Management, Inc.  
Address: 3078 County Rd. 180, Carthage, MO 64836

Continuing Authority: Same as above  
Address: Same as above

Facility Name: Same as above  
Facility Address: Same as above

Legal Description: See Page 2  
UTM Coordinates: See Page 2

Receiving Stream: See Page 2  
First Classified Stream and ID: See Page 2  
USGS Basin & Sub-watershed No.: See Page 2

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

**FACILITY DESCRIPTION**

See Page Two (2) for facility description. Facility is undergoing remediation through the department's Hazardous Waste Program. Facility previously known as ICI Explosives USA, Inc. and Atlas Powder Company.

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

April 1, 2013                      December 16, 2016  
Effective Date                      Modification Date

  
\_\_\_\_\_  
Harry Bozoin, Director, Department of Natural Resources

December 31, 2017  
Expiration Date

  
\_\_\_\_\_  
John Madros, Director Water Protection Program

## Facility Description (continued)

**Outfall 004**- former SIC # 2892

Outfall receives stormwater runoff and spring seepage from a 246 acre watershed where former production facilities existed and several Corrective Action sites and pasture lands. Some stormwater runoff from the northwest portion of General Dynamics/EBVEEC's property drains toward this outfall.

Legal Description: SE ¼, SW ¼, Sec. 25, T28N, R32W; Jasper Co.

UTM Coordinates: x= 377679; y= 4108254

Receiving Stream: Unnamed Tributary to Grove Creek

First Classified Stream and ID: Grove Creek (P) (03204)

USGS Basin & Sub-watershed No.: (11070207-0606)

Actual flow is dependant on precipitation.

**Outfall 018**- former SIC # 2892

Discharge from overland flow wetlands; normally does not discharge. Some stormwater runoff from the southern portion of General Dynamics/EBVEEC's property drains toward this outfall.

Legal Description: NW ¼ ,SE ¼, Sec. 36, T28N, R32W; Jasper Co.

UTM Coordinates: x= 377963; y= 4107175

Receiving Stream: Tributary to Grove Creek (U)

First Classified Stream and ID: Grove Creek (P) (03204)

USGS Basin & Sub-watershed No.: (11070207-0606)

Flow is dependant on precipitation and retention capability of the Constructed Wetlands.

<b>A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>				PAGE NUMBER 3 of 9		
				PERMIT NUMBER: MO-0002453		
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MONITORING FREQUENCY	SAMPLE TYPE
<u>Outfall 004 (Note 1) &amp; 018 (Note 2)</u>						
Flow	MGD	*		*	once/quarter***	24 hr. estimate
Precipitation	inches	*		*	once/day	24 hr. estimate
pH	SU	**		**	once/quarter***	grab
Ammonia	mg/L	*		*	once/quarter***	grab
Nitrate	mg/L	*		*	once/quarter***	grab
Perchlorate	µg/L	*		*	once/quarter***	grab
2,6 Dinitrotoluene	µg/L	*		*	once/quarter***	grab
2,4 Dinitrotoluene	µg/L	*		*	once/quarter***	grab
Settleable Solids	mL/L/hr	*		*	once/quarter***	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>JANUARY 28, 2014</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
<b>B. STANDARD CONDITIONS</b>						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>PART I</u> STANDARD CONDITIONS DATED <u>OCTOBER 1, 1980</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

MO 780-0010 (8/91)

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS** (continued)

\*- Monitoring requirement only.

\*\*- pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 pH units.

\*\*\*- See table below for quarterly sampling:

Sample discharge at least once for the months of: January, February, or March (1st Quarter) April, May, or June (2nd Quarter) July, August, or September (3rd Quarter) October, November, or December (4th Quarter)
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Note 1: Sampling shall be done once per quarter in any precipitation event that causes Outfall 004 to discharge. Precipitation events include rainfall as well as run-off from the melting of frozen precipitation. If there is no flow in a given sampling period, an actual analysis is not necessary. Simply report as no discharge

Note 2: Outfall 018 is discharge from the overland flow wetlands. The outfall does not discharge under normal weather conditions. When discharging, a sample shall be collected.

### C. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
  - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
    - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
    - (2) controls any pollutant not limited in the permit.
  - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
  - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

2. All outfalls must be clearly marked in the field.

3. Changes in Discharges of Toxic Substances

The permittee shall notify the Director as soon as it knows or has reason to believe:

- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
  - (1) One hundred micrograms per liter (100 µg/L);
  - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
  - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
  - (4) The level established in Part A of the permit by the Director.
- (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.
- (c) That the effluent limit established in part A of the permit will be exceeded.

4. Report as no-discharge when a discharge does not occur during the report period.

5. Water Quality Standards

- (a) To the extent required by law, discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
- (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
  - (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
  - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
  - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
  - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
  - (5) There shall be no significant human health hazard from incidental contact with the water;
  - (6) There shall be no acute toxicity to livestock or wildlife watering;
  - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
  - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

C. SPECIAL CONDITIONS (continued)

6. The permittee shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must be kept on-site and should not be sent to DNR unless specifically requested. The permittee shall provide a copy of the SWPPP to those who are responsible for installation, operation, or maintenance of any BMP. The permittee, their representative, and/or the contractor(s) responsible for installation, operation and maintenance of the BMPs shall have a current copy of the SWPPP with them when on the project site. The permittee shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in the following document:

Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators, (Document number EPA 833-B-09-002) published by the United States Environmental Protection Agency (USEPA) in February 2009.

The SWPPP must include the following:

- (a) An assessment of all stormwater discharges associated with this facility, including any activities from construction and land disturbance activities. This must include a list of potential contaminants and an annual estimate of amounts that will be used in the described activities.
  - (b) A listing of specific Best Management Practices (BMPs) and a narrative explaining how BMPs will be implemented to control and minimize the amount of potential contaminants that may enter stormwater. Minimum BMPs are listed in SPECIAL CONDITIONS #9 and 10 below.
  - (c) The SWPPP must include a schedule for minimum monthly site inspections and a brief written report. The inspections must include observation and evaluation of BMP effectiveness, deficiencies, and corrective measures that will be taken. Deficiencies that consist of minor repairs or maintenance must be corrected within seven (7) days. Any corrective measure that necessitates major construction may also need a construction permit. Inspection reports must be kept on site with the SWPPP and maintained for a period of five (5) years. These must be made available to department personnel upon request.
  - (d) Discuss whether or not a 404/401 Permit is required for the project;
  - (e) A provision for designating an individual to be responsible for environmental matters.
  - (f) A provision for providing training to all personnel involved in material handling and storage, and housekeeping of maintenance and cleaning areas. Proof of training shall be submitted on request of DNR.
  - (g) For construction and land disturbance activities, the SWPPP must describe the nature of the construction activity, including:
    - (1) The function of the project (e.g., low density residential, shopping mall, highway, etc.);
    - (2) The intended sequence and timing of activities that disturb the soils at the site; and
    - (3) Estimates of the total area expected to be disturbed by excavation, grading, or other construction activities including off-site borrow and fill areas.
7. The purpose of the SWPPP is to ensure; the design, implementation, management and maintenance of BMPs in order to prevent sediment and other pollutants in stormwater discharges; compliance with the Missouri Water Quality Standards; and compliance with the terms and conditions of this permit. A deficiency of a BMP means it was not effective in preventing pollution [10 CSR20-2.010(56)] of waters of the state, or failed to achieve compliance with benchmarks. Corrective action means the facility took steps to eliminate the deficiency.
8. Description of BMPs:
- (a) The SWPPP shall include a description of both structural and non-structural BMPs that will be used at the site. The SWPPP shall provide the following general information for each BMP which will be used one or more times at the site:
    - (1) Physical description of the BMP;
    - (2) Site and physical conditions that must be met for effective use of the BMP;
    - (3) BMP installation/construction procedures, including typical drawings;
    - (4) Operation and maintenance procedures for the BMP.
    - (5) Whether the BMP is temporary or permanent;
    - (6) Where, in relation to other site features, the BMP is to be located; and
    - (7) Site conditions that must be met before removal of the BMP if the BMP is not a permanent BMP.
  - (b) Selection of Temporary and Permanent Structural BMPs: The permittee shall select appropriate structural BMPs for use at the site and list them in the SWPPP. Examples of structural BMPs that the permittee should consider specifying in the SWPPP include diverting flows from undisturbed areas away from disturbed areas, silt (filter fabric and/or straw bale) fences, earthen diversion dikes, drainage swales, sediment traps, rock check dams, subsurface drains (to gather or transport water for surface discharge elsewhere), pipe slope drains (to carry concentrated flow down a slope face), level spreaders (to distribute concentrated flow into sheet flow), storm drain inlet protection and outlet protection, reinforced soil retaining systems, gabions, temporary or permanent sediment basins and other appropriate BMPs

C. SPECIAL CONDITIONS (continued)

- (1) Disturbed Areas: Slopes for disturbed areas must be defined in the SWPPP. A site map or maps defining the sloped areas for all phases of the project must be included in the SWPPP. Stabilization must be initiated immediately and completed within seven (7) calendar days where soil disturbing activities have temporarily ceased on any portion of the site and will not resume for a period exceeding fourteen (14) calendar days the permittee shall construct BMPs to establish interim stabilization. Interim stabilization shall consist of well established and maintained BMPs that are reasonably certain to protect waters of the state from sediment pollution over an extended period of time. This may require adding more BMPs to an area than is normally used during daily operations. These BMPs may include a combination of sediment basins, check dams, sediment fences and mulch. The types of BMPs used must be suited to the area disturbed, taking into account the number of acres exposed and the steepness of the slopes. If the slope of the area is greater than 3:1 (three feet horizontal to one foot vertical) or if the slope is greater than 3% and greater than 150 feet in length, then the permittee shall establish interim stabilization within seven days of ceasing operations on that part of the site. Final stabilization of disturbed areas must be initiated immediately and completed within seven (7) calendar days whenever any clearing, grading, excavating or other earth disturbing activities have permanently ceased on any portion of the site. Allowances to the seven (7) day completion period for temporary and final stabilization may be made due to weather and equipment malfunctions. The use of allowances shall be documented in the SWPPP.
- (2) Installation: The permittee shall ensure the BMPs are properly installed at the locations and relative times specified in the SWPPP. Peripheral or border BMPs to control runoff from disturbed areas shall be installed or marked for preservation before general site clearing is started. Note that this requirement does not apply to earth disturbances related to initial site clearing and establishing entry, exit and access of the site, which may require that stormwater controls be installed immediately after the earth disturbance. Stormwater discharges from disturbed areas which leave the site shall pass through an appropriate impediment to sediment movement such as a sedimentation basin, sediment traps and silt fences prior to leaving the land disturbance site. A drainage course change shall be clearly marked on a site map and described in the SWPPP. The location of all BMPs must be indicated on a site map, included in the SWPPP.
- (3) Sedimentation Basins: The SWPPP shall include a sedimentation basin for each drainage area with ten or more acres disturbed at one time. The sedimentation basin shall be sized to contain a volume of at least 3,600 cubic feet per each disturbed acre draining thereto. Accumulated sediment shall be removed from the basin when basin is 50% full. When discharging from basins and impoundments, utilize outlet structures that withdraw water from the surface unless infeasible. Discharges from the basin shall not cause scouring of the banks or bottom of the receiving stream. The SWPPP shall require the basin be maintained until final stabilization of the disturbed area served by the basin.
- (4) Where use of a sediment basin is impractical, the SWPPP shall evaluate and specify other similarly effective BMPs to be employed to control erosion and sediment delivery. These similarly effective BMPs shall be selected from appropriate BMP guidance documents authorized by this permit. The BMPs must provide equivalent water quality protection to achieve compliance with this permit. The SWPPP shall require both temporary and permanent sedimentation basins to have a stabilized spillway to minimize the potential for erosion of the spillway or basin embankment.
- (5) Pollution Prevention Measures: The SWPPP shall include BMPs for pollution prevention measures. At minimum such measures must be designed, installed, implemented and maintained to:
  - (a) Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
  - (b) Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials present on the site to precipitation and to stormwater; and
  - (c) Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures. Included but not limited to the installation of containment berms and use of drip pans at petroleum product and liquid storage tanks and containers.

C. SPECIAL CONDITIONS (continued)

- (6) Roadways: Where applicable, upon installation of or connection to roadways, all efforts should be made to prevent the deposition of earth and sediment onto roadways through the use of proper BMPs. Stormwater inlets susceptible to receiving sediment from the permitted land disturbance site shall have curb inlet protection. Where stormwater will flow off the end of where a roadway terminates, a sediment catching BMP such as gravel berm or silt fence shall be provided. Roadways and curb inlets shall be cleaned weekly or following a rainfall that generates a run-off. Where practicable, construction entrance BMP controls shall be used to prevent sediment trackout.
  - (7) Dewatering: Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls. The SWPPP shall include a description of any anticipated dewatering methods including the anticipated volume of water to be discharged and the anticipated maximum flow discharged from these dewatering activities expressed in gallons per minute. Maximum flow may be stated in the SWPPP as an estimate based on the type and capacity of equipment being used for dewatering. The SWPPP shall call for specific BMPs designed to treat water pumped from trenches and excavations and in no case shall this water be pumped off-site without being treated by the specified BMPs. When discharging from basins and impoundments utilize outlet structures that withdraw water from the surface, unless infeasible.
  - (c) Good housekeeping practices shall be maintained at all times to keep waste from entering waters of the state. Solid and hazardous waste management include providing trash containers and regular site clean up for proper disposal of solid waste such as scrap building material, product/material shipping waste, food containers and cups, and providing containers and proper disposal of waste paints, solvents and cleaning compounds. The provision of portable toilets for proper disposal of sanitary sewage and the storage of construction materials should be kept away from drainage courses and low areas.
  - (d) All fueling facilities present shall at all times adhere to applicable federal and state regulations concerning underground storage, above ground storage and dispensers.
  - (e) Hazardous wastes that are transported, stored, or used for maintenance, cleaning, or repair shall be managed according to the provisions of the Missouri Hazardous Waste Laws and Regulations.
  - (f) All paint, solvents, petroleum products, petroleum waste products and storage containers such as drums, cans, or cartons shall be stored according to BMPs. The materials exposed to precipitation shall be stored in watertight, structurally sound, closed containers. All containers shall be inspected for leaks or spillage.
9. Amending/Updating the SWPPP: The permittee shall amend and update the SWPPP as appropriate during the term of the permit. The permittee shall amend the SWPPP at a minimum whenever the:
    - (a) Additional or new areas are identified for land disturbance activities
    - (b) Design, operation, or maintenance of BMPs is changed;
    - (c) Design of the construction project is changed that could significantly affect the quality of the stormwater discharges;
    - (d) Permittee's inspections indicate deficiencies in the SWPPP or any BMP;
    - (e) Department notifies the permittee in writing of deficiencies in the SWPPP;
    - (f) SWPPP is determined to be ineffective in minimizing or controlling erosion and sedimentation (e.g., there is visual evidence of excessive site erosion or excessive sediment deposits in streams or lakes);
    - (g) Department determines violations of water quality standards may occur or have occurred.
  10. Release of a hazardous substance must be reported to the department in accordance with 10 CSR 24-3.010. A record of each reportable spill shall be retained with the SWPPP and made available to the department upon request.
  11. Permittee needs to be aware that if blocks of the plant site are sold before outfall termination, new owners may need to establish their own outfalls.
  12. Test procedures for the analysis of pollutants shall be in accordance with the references methods listed in Missouri Clean Water Commission Effluent Regulation 10 CSR 20-7015(9)(A) 2. unless alternates are approved by the Department. The facility shall ensure that the testing lab uses an approved test method with a detection limit below water quality criteria for any sampling conducted, even for parameters that are listed as monitoring only, as the data collected will be used to determine if limitations need to be established.

C. SPECIAL CONDITIONS (continued)

13. Electronic Discharge Monitoring Report (eDMR) Submission System

- (a) Discharge Monitoring Reporting Requirements. The permittee must electronically submit compliance monitoring data via the eDMR system. In regards to Standard Conditions Part I, Section B, #7, the eDMR system is currently the only Department approved reporting method for this permit.
- (b) Programmatic Reporting Requirements. The following reports (if required by this permit) must be electronically submitted as an attachment to the eDMR system until such a time when the current or a new system is available to allow direct input of the data:
  - (1) Any additional report required by the permit excluding bypass reporting.  
After such a system has been made available by the department, required data shall be directly input into the system by the next report due date.
- (c) Other actions. The following shall be submitted electronically after such a system has been made available by the department:
  - (1) General Permit Applications/Notices of Intent to discharge (NOIs);
  - (2) Notices of Termination (NOTs);
  - (3) No Exposure Certifications (NOEs);
- (d) Electronic Submissions. To access the eDMR system, use the following link in your web browser:  
<https://edmr.dnr.mo.gov/edmr/E2/Shared/Pages/Main/Login.aspx>.
- (e) Waivers from Electronic Reporting. The permittee must electronically submit compliance monitoring data and reports unless a waiver is granted by the department in compliance with 40 CFR Part 127. The permittee may obtain an electronic reporting waiver by first submitting an eDMR Waiver Request Form: <http://dnr.mo.gov/forms/780-2692-f.pdf>. The department will either approve or deny this electronic reporting waiver request within 120 calendar days. Only permittees with an approved waiver request may submit monitoring data and reports on paper to the Department for the period that the approved electronic reporting waiver is effective.

#### D. LAND DISTURBANCE ACTIVITIES

1. This permit authorizes the discharge of stormwater and certain non-stormwater discharges from land disturbance sites that disturb one or more acres or disturb less than one acre when excavations and soil bioremediation areas that will disturb a cumulative total of one or more acres over the life of the project. This permit also authorizes the discharge of stormwater and certain non-stormwater discharges from smaller projects where the Missouri Department of Natural Resources (department) has exercised its discretion to require a permit [10 CSR 20-6.200 (1)(B)].
2. This permit authorizes non-stormwater discharges from the following activities provided that these discharges are addressed in the permittee's specific Stormwater Pollution Prevention Plan (SWPPP):
  - (a) De-watering activities if there are no contaminants other than sediment present in the discharge, and the discharge is treated as specified in Requirements, Section C.3.m. of this permit;
  - (b) Flushing water hydrants and potable water lines;
  - (c) Water only (i.e., without detergents or additives) rinsing of streets and buildings; and
  - (d) Site watering to establish vegetation.
3. This permit does not authorize the placement of fill materials in flood plains, the obstruction of stream flow, directing stormwater across private property not owned or operated by the permittee, or changing the channel of a defined drainage course. This permit addresses the quality of the stormwater runoff and the minimization of off-site migration of sediments and other water contaminants.
4. This permit does not authorize any discharge to waters of the state of sewage or pollutants including but not limited to:
  - (a) Any hazardous material, oil, lubricant, solid waste or other non-naturally occurring substance from the site, including fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;
  - (b) Soaps or solvents used in vehicle and equipment washing;
  - (c) Hazardous substances or petroleum products from an on-site spill or handling and disposal practices,
  - (d) Wash and/or rinse waters from concrete mixing equipment including ready mix concrete trucks, unless managed by an appropriate control. Any such pollutants must be adequately treated and addressed in the SWPPP, and cannot be discharged to waters of the state;
  - (e) Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;
  - (f) Wastewater generated from air pollution control equipment or the containment of scrubber water in lined ponds;
  - (g) Domestic wastewaters, including gray waters; or
  - (h) Industrial stormwater runoff.
5. This permit does not authorize land disturbance activity in jurisdictional waters of the United States as defined by the Army Corps of Engineers, unless the permittee has obtained the required 404/401 permit. Land disturbance activities may not begin in the affected portions of the site until the required 404/401 permits have been obtained.
6. This permit does not supersede compliance with the Historic Preservation Act or the Endangered Species Act.
7. This permit does not supersede any requirement for obtaining project approval under an established local authority.
8. These requirements do not supersede nor remove any requirement to comply with county or other local ordinances [10 CSR20-6.010(14)(D)].
9. For areas undergoing land disturbance activities, a site inspection report is required. The permittee (or a representative of the permittee) shall conduct regularly scheduled inspections at least once per seven calendar days. These inspections shall be conducted by a qualified person, one who is responsible for environmental matters at the site, or a person trained by and directly supervised by the person responsible for environmental matters at the site.
10. For disturbed areas that have not been finally stabilized, all installed BMPs and other pollution control measures shall be inspected for proper installation, operation and maintenance. All stormwater outfalls shall be inspected for evidence of erosion or sediment deposition.
11. When practicable the receiving stream shall also be inspected for 50 feet downstream of the outfall. Any structural or maintenance problems shall be noted in an inspection report and corrected within seven calendar days of the inspection, as per EMI's SWPPP. If a rainfall causes stormwater runoff to occur on-site, the BMPs must be inspected within a reasonable time period after the rainfall event has ceased. These inspections must occur within 48 hours after the rain event has ceased during a normal work day and within 72 hours if the rain event ceases during a non-work day such as a weekend or holiday.

D. LAND DISTURBANCE ACTIVITIES (continued)

12. Notification to All Contractors: The permittee shall be responsible for notifying each contractor or entity (including utility crews and city employees or their agents) who will perform work at the site of the existence of the SWPPP and what action or precautions shall be taken while on-site to minimize the potential for erosion and the potential for damaging any BMP. The permittee is responsible for any damage a subcontractor may do to established BMPs and any subsequent water quality violation resulting from the damage.
13. Change in discharge: In the event that unanticipated soil contamination or hazardous substances are discovered at the site during land disturbance activities, the permittee shall notify the department's regional office by telephone as soon as practicable but no later than 24 hours after discovery. The permittee must also notify the department's regional office in writing no later than 14 calendar days after discovery.
14. Land disturbance Sampling Requirements and Effluent Limitations
  - (a) The effluent limitation for Settleable Solids from a land disturbance stormwater outfall discharging shall not exceed 2.5 ml/L per Standard Method 2540 F, except immediately following the local 2-year, 24-hour storm event. The Settleable Solids limit is not enforceable during or greater than the local 2-year, 24-hour storm event.
  - (b) The Department may require sampling and reporting as a result of illegal discharges, compliance issues, complaint investigations, or other such evidence of contamination from activities at the site. If such an action is needed, the Department will specify in writing any sampling requirements, including such information as location, extent and parameters.
15. If this permit is reopened, modified or revoked pursuant to this Section, the permittee retains all rights under Chapter 536 and 644 Revised Statutes of Missouri upon the Department's reissuance of the permit as well as all other forms of administrative, judicial, and equitable relief available under law.

**MISSOURI DEPARTMENT OF NATURAL RESOURCES**  
**EDMR STATEMENT OF BASIS**  
**MO-0002453**  
**EXPERT MANAGEMENT, INC.**

This Statement of Basis gives pertinent information regarding an internal minor permit modification to the above listed operating permit without the need for a public comment process. A statement of basis is not an enforceable part of a Missouri State Operating Permit.

**Part I – Facility Information**

Facility Type: Major Industrial  
Facility SIC Code(s): formerly #2892  
Facility Description: former chemical and explosives manufacturing facility; site under remediation

**Part II – Modification Rationale**

This operating permit was modified by adding a special condition (#C.13.) to the permit to require the permittee to submit all discharge monitoring reports electronically (eDMR) to the department. The final rule (eReporting Rule) substitutes electronic reporting for paper-based reports and, over the long term, saves time and resources for permittees, states, tribes, territories, and EPA, while improving compliance and better protecting the Nation's waters. The final rule requires permittees and regulators to use existing, available information technology to electronically report information and data related to the NPDES permit program in lieu of filing paper-based reports. All authorized programs are required to electronically transmit the federally-required data (identified in appendix A to 40 CFR part 127) to EPA. The purpose and need for this rule was highlighted in the development of the Clean Water Act Enforcement Action Plan (Plan).

Announced by EPA in October 2009, the Plan was a collaborative effort by EPA and state environmental agencies to explore opportunities to improve water quality by emphasizing and adopting new approaches that will improve how the NPDES permitting and enforcement program is administered. The goals of the Plan include improving transparency of the information on compliance and enforcement activities in each state, connecting this information to local water quality, and providing the public with real-time, easy access to this information.

Page numbers were formatted to allow for additional page. No other changes were made at this time to this permit.

**Part III – Administrative Requirements**

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit.

**DATE OF STATEMENT OF BASIS:** NOVEMBER 4, 2016

**COMPLETED BY:**

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**MISSOURI DEPARTMENT OF NATURAL RESOURCES**  
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**Missouri Department of Natural Resources**  
**FACT SHEET**  
**FOR THE PURPOSE OF RENEWAL OF**  
**MO-0002453**  
**EXPERT MANAGEMENT, INC.**

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollution Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of storm water from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (Department) under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended). MSOPs are issued for a period of five (5) years unless otherwise specified.

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)2.] a Factsheet shall be prepared to give pertinent information regarding the applicable regulations, rationale for the development of effluent limitations and conditions, and the public participation process for the Missouri State Operating Permit (operating permit) listed below.

A Factsheet is not an enforceable part of an operating permit. This Factsheet is for an Industrial Facility .

**Part I – Facility Information**

Facility Type: IND- stormwater; former explosives, chemical production facility undergoing remediation  
Facility SIC Code(s): formerly #2892

**Facility Description:**

Former chemical and explosives manufacturing facility, formerly known as Atlas Chemical Company, ICI Explosives and Joplin Manufacturing. The facility previously manufactured industrial grade ammonium nitrate, weak nitric acid, ammonium nitrate based emulsion explosives, trinitrotoluene (tnt), blasting agents and other chemicals in the support of the explosives industry. The manufacturing was limited to approximately 583 acres in the core of the facility, with approximately 1,300 more acres used as buffer land. Expert Management retains responsibility for post-closure care, corrective action, site clean-up, and monitoring related to the soil and groundwater. As the facility is undergoing remediation, it also has a permit with the department's Hazardous Waste Program (MOD077887909). For more information on the previous activities onsite, clean-up actions, and closed outfalls, see Appendix B. Appendix A provides a facility map with Outfall 004 and Outfall 018 marked. Approximately 246 acres drains to Outfall 004, while 231 acres drains to Outfall 018.

The company established a consent decree in 1989 with US EPA and the department for historic contamination. In 1991, various production lines began shutting down. With the shut down of production lines, production buildings began being demolished allowing for corrective action to occur. Operations at the facility ceased in 2001. Since 2001, the company has been working on remediation of various areas with a hazardous waste post-closure permit and the water stormwater permit. In 1999, a series of 10 wetlands were constructed, 3 as active treatment and 7 as upland wetland. The construction of the wetlands changed the drainage patterns of the area, which allowed outfalls to be closed as flows were rerouted. To close Outfall #002, the wetlands were further extended in 2003. There are over 40 acres of wetlands onsite now.

Have any changes occurred at this facility or in the receiving water body that effects effluent limit derivation?  - Yes

Previous permit designated the month sampling was to occur, while in this permit sampling can occur in any month during the quarter to allow the facility flexibility in collecting samples. Ammonia and Nitrate effluent limits were removed from the permit, as production effluent limit guidelines do not apply to remediation. Missouri Water Quality Standards for nitrate are based on groundwater criteria. The facility does not discharge to a losing stream. As part of EMI's RCRA Part 1 permit, groundwater monitoring of nitrates is required. There are sinkholes in the area and remediation is ongoing, thus ammonia and nitrate quarterly monitoring remains. Settleable solids monitoring was added to be consistent with other industrial stormwater permits and as part of the land disturbance requirements that have been incorporated. A sufficiently sensitive testing method is required for 2,4-dinitrotoluene and 2,6-dinitrotoluene.

As part of the remediation activities occurring on site, the facility may treat contaminated soil, which the potential exists for aggregates to be stored outside. With the incorporation of land disturbance and SWPPP requirements, this would minimize stormwater runoff. The area for treating contaminated soil drains to Outfall 018.

In 2009, the Hazardous Waste Program modified its Permit to include benzene, ethylbenzene, toluene, xylene, and methyl tertiary butyl ether in the Table 1: Groundwater Protection Standard of the Hazardous Waste Part I Permit. In discussions with the facility and the Hazardous Waste Program, monitoring at Outfall 004 is not in the drainage area where the underground storage containers were and monitoring for the parameters are not appropriate at Outfalls 004 or 018. The facility is not staffed on weekends, so it is expected for the facility to collect their samples during the work week when staff is onsite.

Application Date: 05/21/2008  
 Expiration Date: 07/11/2008  
 Last Inspection: 04/21/2005 In Compliance

**OUTFALL(S) TABLE:**

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
004	--	BMPs	Stormwater	~0.10
018	--	BMPs	Stormwater	~0.10*

\*For Outfall #018, the distance to classified segment is provided if there is a discharge. Outfall 018 does not normally discharge.

Comments:

See Appendix B for list of outfalls locations, effluent descriptions, receiving streams and dates removed from monitoring. Only Outfalls #004 and #018 are actively permitted, the other outfalls have been closed during remediation activities. Outfalls #005-#008 were removed in 1996 or before. Outfalls #001, #003, #012- #016 were removed in 2003. Outfalls #002, #009- #011, and #017 were removed in 2006. Instream monitoring and compliance were removed from the permit in 2003. Appendix B also provides a short history of the facility.

Receiving Water Body's Water Quality & Facility Performance History:

No effluent limits violations in the previous five years. The permit was modified in 2006 for the closure of Outfalls #002, #009- #011, and #017. Outfall #018 was added to the permit in 2006 to replace Outfall #002. Outfall 018 was designated an emergency discharge in the previous permit; however it was decided that monitoring only when discharging was appropriate.

**Part II – Operator Certification Requirements**

As per [10 CSR 20-6.010(8) Terms and Conditions of a Permit], permittees shall operate and maintain facilities to comply with the Missouri Clean Water Law and applicable permit conditions and regulations. Operators or supervisors of operations at regulated wastewater treatment facilities shall be certified in accordance with [10 CSR 20-9.020(2)] and any other applicable state law or regulation. As per [10 CSR 20-9.010(2)(A)], requirements for operation by certified personnel shall apply to all wastewater treatment systems, if applicable, as listed below:

Not Applicable : This facility is not required to have a certified operator.

**Part III – Receiving Stream Information**

**APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:**

As per Missouri's Effluent Regulations [10 CSR 20-7.015], the waters of the state are divided into seven (7) categories. Each category lists effluent limitations for specific parameters, which are presented in each outfall's Effluent Limitation Table and further discussed in the Derivation & Discussion of Limits section.

All Other Waters [10 CSR 20-7.015(8)]:

10 CSR 20-7.031 Missouri Water Quality Standards, the Department defines the Clean Water Commission water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and/or 1<sup>st</sup> classified receiving stream's beneficial water uses to be maintained are located in the Receiving Stream Table located below in accordance with [10 CSR 20-7.031(3)].

**RECEIVING STREAM(S) TABLE:**

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	8-DIGIT HUC	EDU**
Tributaries to Grove Creek	U	--	General Criteria	11070207	Ozark/Neosho
Grove Creek	P	03204	AQL, LWW, WBC(B)***		

\* - Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL), Cold Water Fishery (CDF), Cool Water Fishery(CLF), Drinking Water Supply (DWS), Groundwater (GRW), Industrial (IND), Irrigation (IRR), Livestock & Wildlife Watering (LWW), Secondary Contact Recreation (SCR), Whole Body Contact Recreation (WBC).

\*\* - Ecological Drainage Unit

\*\*\* - UAA was conducted on Center Creek in 2007 with WBC use retained.

**RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:**

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Tributaries to Grove (U)	0	0	0
Grove Creek (P)	0.01	0.1	1.0

**MIXING CONSIDERATIONS TABLE:**

Mixing Zone: Not Allowed [10 CSR 20-7.031(4)(A)4.B.(I)(a)].

Zone of Initial Dilution: Not Allowed [10 CSR 20-7.031(4)(A)4.B.(I)(b)].

**Part IV – Rationale and Derivation of Effluent Limitations & Permit Conditions**

**ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:**

As per [10 CSR 20-7.015(4)(A)], discharges to losing streams shall be permitted only after other alternatives including land application, discharges to a gaining stream and connection to a regional wastewater treatment facility have been evaluated and determined to be unacceptable for environmental and/or economic reasons.

Not Applicable : The facility is an existing facility. Previous outfalls discharged to losing sections of Grove Creek, however due to the remediation efforts, those outfalls are now closed.

**ANTI-BACKSLIDING:**

A provision in the Federal Regulations [CWA §303(d)(4); CWA §402(c); 40 CFR Part 122.44(I)] that requires a reissued permit to be as stringent as the previous permit with some exceptions.

- Limitations in this operating permit for the reissuance of this permit conform to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, and 40 CFR Part 122.44. Ammonia and Nitrate effluent limits were removed from the permit, as production effluent limit guidelines do not apply to remediation. Missouri Water Quality Standards for nitrate are based on groundwater criteria. The facility does not discharge to a losing stream. As part of EMI’s RCRA Part 1 permit, groundwater monitoring of nitrates is required. There are sinkholes in the area and remediation is ongoing, thus ammonia and nitrate quarterly monitoring remains.

**ANTIDEGRADATION:**

In accordance with Missouri’s Water Quality Standard [10 CSR 20-7.031(2)], the Department is to document by means of Antidegradation Review that the use of a water body’s available assimilative capacity is justified. Degradation is justified by documenting the socio-economic importance of a discharging activity after determining the necessity of the discharge.

- Renewal no degradation proposed and no further review necessary.

**AREA-WIDE WASTE TREATMENT MANAGEMENT & CONTINUING AUTHORITY:**

As per [10 CSR 20-6.010(3)(B)], ...An applicant may utilize a lower preference continuing authority by submitting, as part of the application, a statement waiving preferential status from each existing higher preference authority, providing the waiver does not conflict with any area-wide management plan approved under section 208 of the Federal Clean Water Act or any other regional sewage service and treatment plan approved for higher preference authority by the Department.

**BIO-SOLIDS, SLUDGE, & SEWAGE SLUDGE:**

Bio-solids are solid materials resulting from wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sludge is any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other such waste having similar characteristics and effect. Sewage sludge is solids, semi-solids, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works.

Not Applicable : This condition is not applicable to the permittee for this specific facility.

**COMPLIANCE AND ENFORCEMENT:**

Enforcement is the action taken by the Water Protection Program (WPP) to bring an entity into compliance with the Missouri Clean Water Law, its implementing regulations, and/or any terms and conditions of an operating permit. The primary purpose of the enforcement activity in the WPP is to resolve violations and return the entity to compliance.

Not Applicable : The permittee/facility is not currently under Water Protection Program enforcement action. No effluent limits violations in the last five years. Previously the facility was under enforcement action till 2001, when it returned to compliance. With the close of operations, demolition, and remediation efforts, the facility has been in compliance since 2001.

**PRETREATMENT PROGRAM:**

The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a Publicly Owned Treatment Works [40 CFR Part 403.3(q)]. Pretreatment programs are required at any POTW and/or municipality with a total design flow greater than 5.0 MGD and receiving industrial wastes that interfere with or pass through the treatment works or are otherwise subject to the pretreatment standards. Pretreatment programs can also be required at POTWs/municipals with a design flow less than 5.0 MGD if needed to prevent interference with operations or pass through.

Not Applicable : The permittee, at this time, is not required to have a Pretreatment Program or does not have an approved pretreatment program.

**REASONABLE POTENTIAL ANALYSIS (RPA):**

Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause or contribute to an in-stream excursion above narrative or numeric water quality standard. In accordance with [40 CFR Part 122.44(d)(iii)] if the permit writer determines that any give pollutant has the reasonable potential to cause, or contribute to an in-stream excursion above the WQS, the permit must contain effluent limits for that pollutant.

Not Applicable : A RPA was not conducted for this facility. This is a former explosives manufacturing facility undergoing remediation and the parameters included are also required to be monitored for under the Hazardous Waste Permit. Based on independent application of the previous permit cycle, the facility does not have the potential to exceed ammonia as N standards.

**REMOVAL EFFICIENCY:**

Removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to Biochemical Oxygen Demand 5-day (BOD<sub>5</sub>) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs)/municipals. Please see the United States Environmental Protection Agency's (EPA) website for interpretation of percent removal requirements for National Pollutant Discharge Elimination System Permit Application Requirements for Publicly Owned Treatment Works and Other Treatment Works Treating Domestic Sewage @ [www.epa.gov/fedrgstr/EPA-WATER/1999/August/Day-04/w18866.htm](http://www.epa.gov/fedrgstr/EPA-WATER/1999/August/Day-04/w18866.htm).

Not Applicable : Influent monitoring is not being required to determine percent removal.

**SANITARY SEWER OVERFLOWS (SSOs), BYPASSES, INFLOW & INFILTRATION (I&I) – PREVENTION/REDUCTION:**

Sanitary Sewer Systems (SSSs) are municipal wastewater collection systems that convey domestic, commercial, and industrial wastewater, and limited amounts of infiltrated groundwater and storm water (i.e. I&I), to a POTW. SSSs are not designed to collect large amounts of storm water runoff from precipitation events.

Untreated or partially treated discharges from SSSs are commonly referred to as SSOs. SSOs have a variety of causes including blockages, line breaks, sewer defects that allow excess storm water and ground water to overload the system, lapses in sewer system operation and maintenance, inadequate sewer design and construction, power failures, and vandalism. A SSOs is defined as an untreated or partially treated sewage release from a SSS. SSOs can occur at any point in an SSS, during dry weather or wet weather. SSOs include overflows that reach waters of the state. SSOs also include overflows out of manholes and onto city streets, sidewalks, and other terrestrial locations. SSSs can back up into buildings, including private residences. When sewage backups are caused by problems in the publicly-owned portion of an SSS, they are considered SSOs.

Not Applicable : This facility is not required to develop or implement a program for maintenance and repair of the collection system; however, it is a violation of Missouri State Environmental Laws and Regulations to allow untreated wastewater to discharge to waters of the state.

**SCHEDULE OF COMPLIANCE (SOC):**

A schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (actions, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit.

Not Applicable : This permit does not contain a SOC.

**STORM WATER POLLUTION PREVENTION PLAN (SWPPP):**

In accordance with 40 CFR 122.44(k) *Best Management Practices (BMPs)* to control or abate the discharge of pollutants when: (1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities; (2) Authorized under section 402(p) of the CWA for the control of storm water discharges; (3) Numeric effluent limitations are infeasible; or (4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

In accordance with the EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (Document number EPA 833-B-09-002) [published by the United States Environmental Protection Agency (USEPA) in February 2009], BMPs are measures or practices used to reduce the amount of pollution entering (regarding this operating permit) waters of the state. BMPs may take the form of a process, activity, or physical structure.

Additionally in accordance with the Storm Water Management, a SWPPP is a series of steps and activities to (1) identify sources of pollution or contamination, and (2) select and carry out actions which prevent or control the pollution of storm water discharges.

Applicable : A SWPPP shall be developed and implemented for each site and shall incorporate required practices identified by the Department with jurisdiction, incorporate erosion control practices specific to site conditions, and provide for maintenance and adherence to the plan. Expert Management has one general permit for land disturbance, MOR109955, which has been incorporated into this permit. The facility should establish a complete site specific SWPPP to incorporate runoff from the land disturbance locations and for the permitted outfalls. For a list of BMPs currently used during land disturbance activities, please see Appendix C: BMPs used at Expert Management. This list can and should be revised as necessary during facility remediation operations to meet site specific conditions. The site specific remediation action plan (RAP) being developed for Hazardous waste Program can be incorporated into the SWPPP to eliminate duplication of work and procedures.

**VARIANCE:**

As per the Missouri Clean Water Law § 644.061.4, variances shall be granted for such period of time and under such terms and conditions as shall be specified by the commission in its order. The variance may be extended by affirmative action of the commission. In no event shall the variance be granted for a period of time greater than is reasonably necessary for complying with the Missouri Clean Water Law §§644.006 to 644.141 or any standard, rule or regulation promulgated pursuant to Missouri Clean Water Law §§644.006 to 644.141.

Not Applicable : This operating permit is not drafted under premises of a petition for variance.

**WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:**

As per [10 CSR 20-2.010(78)], the amount of pollutant each discharger is allowed by the Department to release into a given stream after the Department has determined total amount of pollutant that may be discharged into that stream without endangering its water quality.

Applicable : Wasteload allocations were calculated where applicable using water quality criteria or water quality model results and the dilution equation below:

$$C = \frac{(C_s \times Q_s) + (C_e \times Q_e)}{(Q_e + Q_s)} \quad (\text{EPA/505/2-90-001, Section 4.5.5})$$

Where C = downstream concentration  
 C<sub>s</sub> = upstream concentration  
 Q<sub>s</sub> = upstream flow  
 C<sub>e</sub> = effluent concentration  
 Q<sub>e</sub> = effluent flow

Chronic wasteload allocations were determined using applicable chronic water quality criteria (CCC: criteria continuous concentration). Acute wasteload allocations were determined using applicable water quality criteria (CMC: criteria maximum concentration). Water quality based maximum daily and average monthly effluent limitations were calculated using methods and procedures outlined in USEPA's "Technical Support Document For Water Quality-based Toxics Control" (EPA/505/2-90-001).

**WLA MODELING:**

There are two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs). If TBELs do not provide adequate protection for the receiving waters, then WQBEL must be used.

Not Applicable : A WLA study was either not submitted or determined not applicable by Department staff.

**WATER QUALITY STANDARDS:**

Per [10 CSR 20-7.031(3)], General Criteria shall be applicable to all waters of the state at all times including mixing zones. Additionally, [40 CFR 122.44(d)(1)] directs the Department to establish in each NPDES permit to include conditions to achieve water quality established under Section 303 of the Clean Water Act, including State narrative criteria for water quality.

**WHOLE EFFLUENT TOXICITY (WET) TEST:**

A WET test is a quantifiable method of determining if a discharge from a facility may be causing toxicity to aquatic life by itself, in combination with or through synergistic responses when mixed with receiving stream water.

Not Applicable : At this time, the permittee is not required to conduct WET test for this facility.

**303(d) LIST & TOTAL MAXIMUM DAILY LOAD (TMDL):**

Section 303(d) of the federal Clean Water Act requires that each state identify waters that are not meeting water quality standards and for which adequate water pollution controls have not been required. Water quality standards protect such beneficial uses of water as whole body contact (such as swimming), maintaining fish and other aquatic life, and providing drinking water for people, livestock and wildlife. The 303(d) list helps state and federal agencies keep track of waters that are impaired but not addressed by normal water pollution control programs.

A TMDL is a calculation of the maximum amount of a given pollutant that a body of water can absorb before its water quality is affected. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan will be developed that shall include the TMDL calculation

Not Applicable : This facility does not discharge to a 303(d) listed stream. However, Outfall 004 is approximately a quarter mile from the confluence of Center Creek and Grove Creek. Center Creek is listed on the 2008 Missouri 303(d) List for cadmium, lead and zinc, which this facility is not considered a source of or considered to contribute to the impairment.

## Part V – Effluent Limits Determination

### **Outfall #004 - Stormwater Outfall & Outfall 018 Constructed Wetlands Outfall**

#### **EFFLUENT LIMITATIONS TABLE:**

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	MGD	1	*		*	N	
PRECIPITATION	MG/L	9	*		*	Y	***
SETTLABLE SOLIDS	ML/L/HR	9	*		*	Y	***
PH	SU	2	**		**	Y	6.0-9.0
AMMONIA AS N	MG/L	3	*		*	Y	20/15 MG/L
NITRATE AS N	MG/L	3	*		*	Y	20/15 MG/L
2,4-DINITROTOLUENE	µG/L	3	*		*	N	
2,6-DINITROTOLUENE	µG/L	3	*		*	N	
PERCHLORATE	µG/L	3	*		*	N	
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

\* - Monitoring requirement only.

\*\* - pH is not to be averaged. pH shall be maintained between 6.5-9.0 Standard Units.

\*\*\* - Parameter not previously established in previous state operating permit.

#### **Basis for Limitations Codes:**

- |  |                                    |
|--|------------------------------------|
| 1. State or Federal Regulation/Law       | 7. Antidegradation Policy          |
| 2. Water Quality Standard (includes RPA) | 8. Water Quality Model             |
| 3. Water Quality Based Effluent Limits   | 9. Best Professional Judgment      |
| 4. Lagoon Policy                         | 10. TMDL or Permit in lieu of TMDL |
| 5. Ammonia Policy                        | 11. WET Test Policy                |
| 6. Dissolved Oxygen Policy               | 12. Antidegradation Review         |

#### **OUTFALLS #004 & 018 – DERIVATION AND DISCUSSION OF LIMITS:**

- **Flow.** In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification.
  - **pH.** 6.5-9.0 standard units per 10 CSR 20-7.031(4)(E).
  - **Precipitation.** The precipitation in inches shall be determined and recorded either from a nearby weather station or from an on-site rain gauge, whichever is preferable. If the facility does not have a rain gauge, the permittee may use data from the Joplin Regional Airport, which is approximately 10 miles to the Northwest.
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Fact Sheet September 2011, revised April 2012
- **Settleable Solids.** Monitoring Requirement added. Using Best Professional Judgment, settleable solids are expected in stormwater outfalls and therefore should be monitored for.
  - **Total Ammonia Nitrogen.** Previous permit had daily maximum of 20 mg/L and monthly average of 10 mg/L. The ammonia effluent limits were reevaluated with the ammonia criteria in Table B of 10 CSR 20-7. Since effluent limits would be based on acute criteria, with the discharge being stormwater only and in review of the previous permit cycle the facility does not have the potential to exceed water quality standards. However as remediation is ongoing at the facility, monitoring only is required for this permit cycle.
  - **Nitrate as N.** Monitoring only. Nitrate effluent limits were removed from the permit as production effluent limit guidelines do not apply to remediation activities. Missouri Water Quality Standards for nitrates are based on groundwater criteria. The facility does not discharge to a losing stream. As part of EMI's RCRA Part 1 Permit, groundwater monitoring of nitrates is required. There are sinkholes in the area and remediation for nitrates is ongoing, thus quarterly monitoring remains.

**Perchlorate.** Monitoring only. Monitoring Requirement from previous state operating permit have been reassessed and verified that they are still protective of the receiving stream's Water Quality. Therefore, effluent limitations have been retained from previous state operating permit. EPA's 2006 assessment guidance on perchlorate sets a drinking water equivalent level of 24.5 µg/L (January 26, 2006 Memo: Assessment Guidance for Perchlorate from Susan Parker Bodine, [http://www.epa.gov/fedfac/pdf/perchlorate\\_guidance.pdf](http://www.epa.gov/fedfac/pdf/perchlorate_guidance.pdf)).

- **2,4-dinitrotoluene.** Monitoring only. Monitoring Requirement from previous state operating permit have been reassessed and verified that they are still protective of the receiving stream's Water Quality. Therefore, effluent limitations have been retained from previous state operating permit.
- **2,6-dinitrotoluene.** Monitoring only. Monitoring Requirement from previous state operating permit have been reassessed and verified that they are still protective of the receiving stream's Water Quality. Therefore, effluent limitations have been retained from previous state operating permit.
- **Minimum Sampling and Reporting Frequency Requirements.** Sampling and reporting frequency requirements have been retained from previous state operating permit. Settleable solids were added to the permit as the parameter is in most stormwater permits. Grab Sampling is appropriate as this is a stormwater permit. Quarterly sampling is retained as remediation is progressing and this is a stormwater permit where the outfalls discharge only during storm events.

## **Part VI – Administrative Requirements**

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit. The proposed determinations are tentative pending public comment.

### **PERMIT SYNCHRONIZATION:**

The Department of Natural Resources is currently undergoing a synchronization process for operating permits. Permits are normally issued on a five-year term, but to achieve synchronization many permits will need to be issued for less than the full five years allowed by regulation. The intent is that all permits within a watershed will move through the Watershed Based Management (WBM) cycle together will all expire in the same fiscal year. This will allow further streamlining by placing multiple permits within a smaller geographic area on public notice simultaneously, thereby reducing repeated administrative efforts. This will also allow the department to explore a watershed based permitting effort at some point in the future.

### **PUBLIC NOTICE:**

The Department shall give public notice that a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in and water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and permittee must be notified of the denial in writing.

The Department must issue public notice of a pending operating permit or of a new or reissued statewide general permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit. For persons wanting to submit comments regarding this proposed operating permit, then please refer to the Public Notice page located at the front of this draft operating permit. The Public Notice page gives direction on how and where to submit appropriate comments.

- The Public Notice period for this operating permit was from October 28, 2011 to December 16, 2011 Responses to the Public Notice of this operating permit warrant the modification of effluent limits and/or the terms and conditions of this permit as explained below:

### **Comment 1: Numeric Effluent Limits on Outfall 004**

#### **(a & b) Nitrate and Ammonia**

The previous permit contained effluent limits for nitrate and ammonia that were not set based on water quality standards. Based on review of the data, monitoring only is required for nitrate and ammonia, as these are pollutants of concern based on historic operations at the facility; however concentrations are below water quality standards. The production effluent limit guidelines do not apply to remediation and the discharge is not to a losing stream.

**(c) BTEX and MTBE**

The additional parameters proposed: benzene, ethylbenzene, toluene, xylene (collectively, "BTEX"), and methyl tertiary butyl ether ("MTBE") were removed based on further discussions with the Department's Hazardous Waste Program and a site visit in May of 2012. The BTEX and MTBE areas identified by the Hazardous Waste Program would not be present in the drainage area of Outfall 004.

**(d) Settleable Solids**

Settleable solids monitoring will remain in the permit. This is a site-specific stormwater permit. While the facility is unique in that it is undergoing remediation, it still has the potential for settleable solid concentrations to impact the streams. With the quarterly monitoring, this will provide the Department a view of how the site-specific best management practices are functioning.

**Comment 2: Quarterly sampling and Annual Reporting**

The facility is to sample a minimum of once per quarter and report once per year. The table has been modified to reflect the months of the year that fall within each quarter.

**Comment 3: Sample collection within 1<sup>st</sup> 60 minutes**

This condition has been removed as the wetlands exist and do not discharge in the first hour of a precipitation event in most cases.

**Comment 4: EPA Sample Method**

This note has been removed. Expert Management shall continue to use an appropriate EPA approved method for sampling.

**Comment 5: Discharges from Outfall 018**

Based on further discussions with the facility, the previous permit did not characterize the discharge capacity and design appropriately. The permit was rewritten to require that a sample shall be collected when discharging. The holding capacity of the wetlands was adjusted and the emergency discharge requirements were removed.

**(a &b) Nitrate and Ammonia**

The previous permit contained effluent limits for nitrate and ammonia that were not set based on water quality standards. Based on review of the data, monitoring only is required for nitrate and ammonia, as these are pollutants of concern based on historic operations at the facility; however concentrations are below water quality standards. The production effluent limit guidelines do not apply to remediation and the discharge is not to a losing stream.

**(c) BTEX and MTBE**

The additional parameters proposed: benzene, ethylbenzene, toluene, xylene (collectively, "BTEX"), and methyl tertiary butyl ether ("MTBE") were removed based on further discussions with the Department's Hazardous Waste Program and a site visit in May of 2012. The BTEX and MTBE areas identified by the Hazardous Waste Program would not be present in the drainage area of Outfall 018.

**(d) Settleable Solids**

Settleable solids monitoring will remain in the permit. This is a site-specific stormwater permit. While the facility is unique in that it is undergoing remediation, it still has the potential for settleable solid concentrations to impact the streams. With the quarterly monitoring, this will provide the Department a view of how the site-specific best management practices are functioning.

**Comment 6: Flow monitoring device**

This condition was removed based on discussions with the facility.

**Comment 7: SWPPP & reporting of deficiencies**

The SWPPP language was not changed. Effluent limits were reduced to monitoring only for the discharge because of establishment of the SWPPP requirements. The department feels monthly monitoring is necessary to protect water quality at this facility.

**Comment 8: EBV Explosives Environmental and its discharge to Expert Management's Outfall 004 and Outfall 018.**

The previous permit documented that stormwater discharges from General Dynamics/EBVEEC may flow onto the Expert Management property. As Expert Management's property surrounds General Dynamics/EBVEEC's property, this potential will always exist. On the Department's site visit in May 2012, Expert Management pointed out areas where such discharges could be occurring. This will need to be addressed with General Dynamics/EBVEEC in their permit. At this time the facility description will continue to reflect that General Dynamics/EBVEEC has the potential to contribute.

**Comment 9: Spill Clean up**

This standard language is considered necessary to track the cumulative effects of multiple small spills at a facility. The language was updated to the following:

Release of a hazardous substance must be reported to the department in accordance with 10 CSR 24-3.010. A record of each reportable spill shall be retained with the SWPPP and made available to the department upon request.

**DATE OF FACT SHEET:** OCTOBER 6, 2010; REVISED SEPTEMBER 1, 2011; UPDATED APRIL 2012

**COMPLETED BY:**

LEASUE MEYERS, ENVIRONMENTAL ENGINEER II

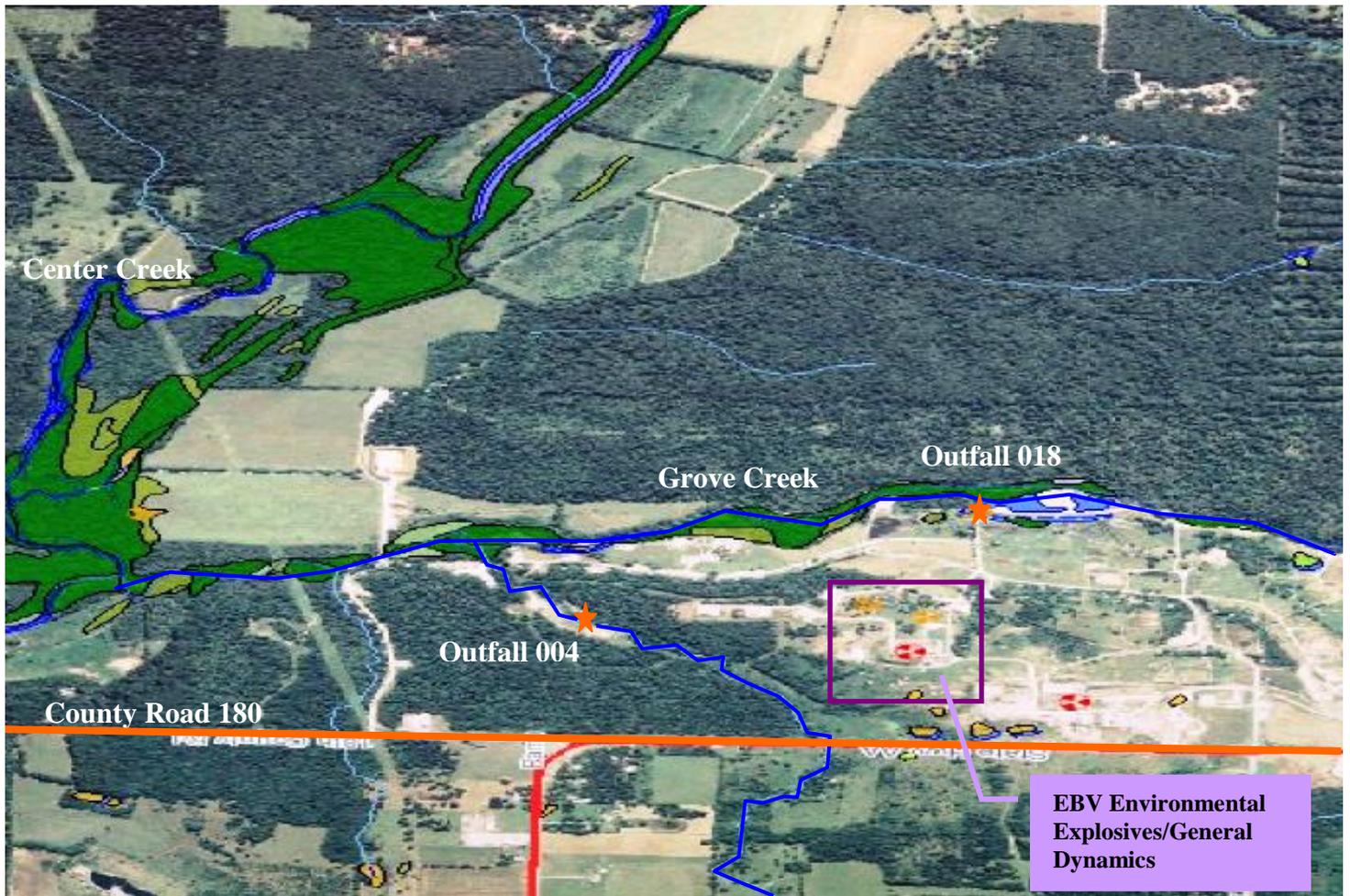
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WATER PROTECTION PROGRAM

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**Appendices**

**APPENDIX A: EXPERT MANAGEMENT FACILITY MAP**



## **Appendix B: Facility History & Outfall Descriptions**

### **FACILITY HISTORY**

The facility was constructed in 1901 by E.I. Dupont de Nemours & Company, (Dupont) Incorporated, approximately 6.5 miles northeast of Joplin in Jasper County. In 1912, DuPont divested portions of its explosives operations and the plant became part of the newly formed Atlas Powder Company. In 1961, the company incorporated under the name Atlas Chemical Industries. The primary product of the plant was commercial grade dynamite. During World War II, trinitrotoluene (TNT) was produced. From 1940 through the late 1980's, a portion of the property was leased to the WR Grace Company for the production of mixed fertilizers. Starting in the 1950's, nitric acid and ammonium nitrate production lines were added. As a part of a joint venture with Standard Oil, ammonia and urea were produced through the 1960's and 1970's. In the early 1970's, ICI acquired Atlas Chemical Industries. ICI then divested the Atlas Powder explosives operations in 1973. Atlas Powder Company became a wholly-owned subsidiary of the Tyler Corporation from approximately mid- 1973 until May 1990, when it was re-acquired by ICI. Several operations ceased between May 1990 and January 2000. ICI sold the bulk of its business and assets (exclusive of the real property) in February 2000 to Joplin Manufacturing, Incorporated (JMI), which continued to manufacture emulsion explosives until September 2001. ICI changed its name to Expert Management Inc. (EMI) in December 2001. JMI ceased operations at the facility and their lease of the real property on January 31, 2002. There are no current manufacturing operations at the facility. EMI retains responsibility for post-closure care, corrective action, site clean-up, and monitoring related to the soil and groundwater.

### **OUTFALL DESCRIPTIONS**

This site is a former explosives / chemical production facility undergoing RCRA corrective action. All equipment and redundant structures have been removed and the property is undergoing Corrective Actions. Acreages and design flows presented in outfall descriptions are based on previous permitted values prior to the outfall being closed. Stormwater and spring seepage have the potential to be impacted by historic production activities. Only Outfalls #004 and #018 are actively permitted, the other outfalls have been closed during remediation activities. Outfalls #005-#008 were closed in 1996 or prior. Outfalls #001, 012- 016 were closed in 2003. Outfalls #002,003,009-011,017 were closed in 2006. Instream monitoring and compliance were removed from the permit in 2003.

#### **OUTFALL #001**-Removed from monitoring in 2003. SIC #2892

Process wastewater from ammonium nitrate and copper recovery system. Outfall also received effluent from the activated sludge plant and stormwater runoff from the nitrogen section. This outfall has been eliminated.

Legal Description: NW ¼, SW ¼, Sec. 36, T28N, R32W

UTM Coordinates: x=376996; y= 4107402

Latitude/Longitude: 37.104861/-94.384306

Receiving Stream: Tributary to Grove Creek (U)

First Classified Stream and ID: Grove Creek (P) (3204)

USGS Basin and sub-basin ID: 11070207-0606

Design Flow was 0.160 MGD.

#### **OUTFALL #002**- Removed from monitoring in 2006. SIC #2892, 1629

Outfall previously received non-contact cooling water from the Large Diameter Emulsion production facility, stormwater runoff from the dynamite production facility and the ammonia production facility, and spring seepage. The ammonia production facility was demolished in 1987. The dynamite production facility was closed in August 1993. As demolition and remediation occurred and other outfalls were closed, stormwater flows were routed to Outfall #002. Outfall #002 received flows from a 231 acre watershed. To close Outfall #002, the ditches were filled in and the wetland areas expanded. In 2006, Outfall #002 was closed and replaced by Outfall# 018 following the expansion of the Constructed Wetlands.

Legal Description: SW ¼, NE ¼, Sec. 36, T28N, R32W

UTM Coordinates: x=377908; y=4107456

Latitude/Longitude: 37.105472/ -94.374056

Receiving Stream: Grove Creek (P)

First Classified Stream and ID: Grove Creek (P) (3204)

USGS Basin and sub-basin ID: 11070207-0606

Design flow was 36.38 MGD.

**OUTFALL #003-** Removed from monitoring in 2003. SIC # 2892

Outfall previously received chiller water, boiler blowdown, stormwater from the ammonium nitrate, weak nitric acid, and the aqua ammonia production facilities, plus stormwater from the sulfuric acid plant. The sulfuric acid facility closed in June 1993. As demolition and remediation occurred and other outfalls were closed, stormwater flows were routed to Outfall #003. Flows from Outfall #003 were rerouted through Outfall #002.

Legal Description: NW ¼, NW ¼, Sec. 1, T27N, R32W

UTM Coordinates: x=377273; y= 4106182

Latitude/Longitude: 37.093907/-94.380988

Receiving Stream: Grove Creek (P)

First Classified Stream and ID: Grove Creek (P) (3204)

USGS Basin and sub-basin ID: 11070207-0606

Design Flow was 2.93 MGD.

**OUTFALL #004-** Main facility outfall, stormwater. SIC #1629

Outfall receives stormwater runoff and spring seepage from a 246 acre watershed where former production facilities existed and several Corrective Action sites and pasture lands. Some stormwater runoff from the northwest portion of EBV Environmental's property drains toward this outfall. 246 acres drains to the Outfall.

Legal Description: NE ¼, SW ¼, Sec. 25, T28N, R32W

UTM Coordinates: x= 377679; y= 4108254

Receiving Stream: Unnamed Tributary to Grove Creek

First Classified Stream and ID: Grove Creek (P) (03204)

USGS Basin & Sub-watershed No.: 11070207-0606

Design flow is 38.74 MGD. Actual flow is dependant on precipitation. Average flow from 2005-2010 was 2.6 MGD.

**OUTFALL #005-** Removed from monitoring in 1996. SIC #2892

This outfall received process wastewater from the nitroglycerin storehouses and the Biazzi facility. The Biazzi facility was permanently closed in August 1993 and the storehouses were demolished in November 1993. The Outfall was eliminated after facility was demolished and stormwater runoff flows were rerouted to Outfall #003.

Legal Description: NW ¼, NW ¼, Sec. 1, T27N, R32W

UTM Coordinates: 377279; y= 4106273

Latitude/Longitude: 37.094733/ -94.38094

Receiving Stream: Ditch to Grove Creek

First Classified Stream and ID: Grove Creek (P) (3204)

USGS Basin and sub-basin ID: 11070207-0606

**OUTFALL #006-** Removed prior to 1991. SIC #2892

This outfall was eliminated, with flows were rerouted to Outfall #002.

**OUTFALL #007-** Removed from monitoring in 1991, with approval to close in 1989. SIC #2892

This outfall is eliminated, as flows were rerouted to Outfall #002.

Legal Description: SW ¼, NE ¼, Sec. 36, T28N, R32W

UTM Coordinates: x= 377952.; y= 4106866

Latitude/Longitude: 37.100167/ -94.37346

Receiving Stream: Grove Creek (P)

First Classified Stream and ID: Grove Creek (P) (3204)

USGS Basin and sub-basin ID: 11070207-0606

**OUTFALL #008-** Removed from monitoring in 1996. SIC #2892

Cooling tower and boiler blowdown from the sulfuric acid facility were discharged to the sulfuric acid unit pond and then through Outfall #008. The sulfuric acid facility was permanently closed in June 1993. Storm water runoff from the former cooling tower was diverted to Outfall #003.

Legal Description: SW ¼, NE ¼, Sec. 1, T27N, R32W

UTM Coordinates: x= 376978; y= 4106131

Latitude/Longitude: 37.093407/ -94.384295

Receiving Stream: Tributary to Grove Creek (U)

First Classified Stream and ID: Grove Creek (P) (3204)

USGS Basin and sub-basin ID: 11070207-0606

Design Flow was 0.04 MGD.

**OUTFALL #009-** Removed from monitoring in 2006. SIC #2892

This outfall receives storm water runoff, primarily from the former sulfuric acid plant, but some runoff traveled overland from other plant areas covering a 3.2 acre watershed. The redundant French Drain collection system was removed and any depressions were backfilled with clean compacted flows. This outfall is closed.

Legal Description: SW ¼, NE ¼, Sec. 1, T27N, R32W

UTM Coordinates: x= 376937; y= 4105877

Latitude/Longitude: 37.09111/- 94.384722

Receiving Stream: Grove Creek (P) (losing)

First Classified Stream and ID: Grove Creek (P) (3204)

USGS Basin and sub-basin ID: 11070207-0606

Design Flow was 0.50 MGD.

**OUTFALL #010-** Removed from monitoring in 2006. SIC #2892

Outfall received storm water runoff, primarily from the former phosphoric acid production and storage facilities. This outfall received stormwater runoff from a 26.9 acre watershed. With the removal of the pipe and converting the swale to a stormwater retention basin in May 2005, this outfall was closed.

Legal Description: SW ¼, NE ¼, Sec. 1, T27N, R32W

UTM Coordinates: x= 376838; y= 4105909

Latitude/Longitude: 37.09139/ -94.38583

Receiving Stream: Swale to Grove Creek (U)(losing)

First Classified Stream and ID: Grove Creek (P) (3204)

USGS Basin and sub-basin ID: 11070207-0606

Design Flow was 4.24 MGD.

**OUTFALL #011-** Removed from monitoring in 2003. SIC #2892

Outfall received storm water runoff, primarily from the former phosphoric acid production and storage facilities, from 24.6 acres. Flows were rerouted to Outfall #010 and the outfall was closed.

Legal Description: SE ¼, NE ¼, Sec. 1, T27N, R32W

UTM Coordinates: x= 3777315; y= 4106173

Latitude/Longitude: 37.09389/-94.380519

Receiving Stream: Tributary to Grove Creek

First Classified Stream and ID: Grove Creek (P) (3204)

USGS Basin and sub-basin ID: 11070207-0606

Design Flow was 3.90 MGD.

**OUTFALL #012-** Removed from monitoring in 2003. SIC #2892

Outfall received process wastewater from the laundry and change house before being land applied on 2.1 acres by spray irrigation. The irrigation and land application ceased in 2000 and the lagoon was sampled in 2002 for closure. The Outfall has been eliminated.

Legal Description: SW ¼, SW ¼, Sec. 36, T28N, R32W

UTM Coordinates: x= 377439; y= 4106794

Latitude/Longitude: 37.099444/ -94.379222

Receiving Stream: Tributary to Grove Creek

First Classified Stream and ID: Grove Creek (P) (3204)

USGS Basin and sub-basin ID: 11070207-0606

Design Flow was 0.02 MGD.

**OUTFALL #013-** Removed from monitoring in 2003. SIC #2892

Process and cooling water from the nitric acid section.

Legal Description: NW ¼, NW ¼, Sec. 01, T27N, R32W

UTM Coordinates: x= 377114; y= 4106167

Latitude/Longitude: 37.09375/ -94.382778

Receiving Stream: Ditch to Grove Creek (U)

First Classified Stream and ID: Grove Creek (P) (3204)

USGS Basin and sub-basin ID: 11070207-0606

**OUTFALL #014-** Removed from monitoring in 2003. SIC #2892

This outfall received stormwater from the distribution maintenance shop and cap magazine areas. The outfall weir was removed and the area regraded to allow natural flow. Outfall has been eliminated.

Legal Description: SE ¼, SW ¼, Sec. 25, T28N, R32W

UTM Coordinates: x= 377608; y= 4108623

Latitude/Longitude: 37.115947/-94.377615

Receiving Stream: Ditch to Grove Creek (U)

First Classified Stream and ID: Grove Creek (P) (3204)

USGS Basin and sub-basin ID: 11070207-0606

**OUTFALL #015-** Removed from monitoring in 2003. SIC #2892

Outfall received process and cooling water from the ammonium nitrate section. Outfall has been eliminated.

Legal Description: SW ¼, Sec. 36, T28N, R32W

UTM Coordinates: x= 377140; y= 4106755

Latitude/Longitude: 37.099056 /-94.382583

Receiving Stream: Tributary to Grove Creek (U)

First Classified Stream and ID: Grove Creek (P) (3204)

USGS Basin and sub-basin ID: 11070207-0606

**OUTFALL #016-** Removed from monitoring in 2003. SIC #2892

This outfall received stormwater runoff from the former ammonium nitrate bagging plant. The outfall weir was removed and the area regraded to allow natural flow. Outfall has been eliminated.

Legal Description: NE ¼, SW ¼, Sec. 25, T28N, R32W

UTM Coordinates: x=377839; y= 4105934

Latitude/Longitude: 37.09175/ -94.374583

Receiving Stream: Ditch to Grove Creek (U)

First Classified Stream and ID: Grove Creek (P) (3204)

USGS Basin and sub-basin ID: 11070207-0606

**OUTFALL #017-** Removed from monitoring in 2006. SIC #2892

This outfall received stormwater runoff from a 14.1 acre watershed where production activities existed. This outfall was closed.

Legal Description: SW ¼, NE ¼, Sec. 1, T27N, R32W,

UTM Coordinates: x= 377285; y= 4106087

Latitude/Longitude: 37.0930556/ -94.38083333

Receiving Stream: Grove Creek (P)

First Classified Stream and ID: Grove Creek (P) (3204)

USGS Basin and sub-basin ID: 11070207-0606

Design Flow was 2.22 MGD.

**OUTFALL #018-** Stormwater runoff from Wetlands. Outfall **created** in 2006. SIC #1692

Flow is dependent on rainfall and retention capability of the Constructed Wetlands. Two-hundred thirty-one (231) acres drain to this outfall. Flow is dependant on rainfall and retention capability of the Constructed Wetlands, which is constructed to retain a 5.8" rain. The Facility Constructed Wetlands watershed receives stormwater runoff from an area containing multiple Corrective Action Sites. Flow from this outfall flows Northeast towards Grove Creek via a series of ditches. No reported discharges from 2006-2010.

Legal Description: NW ¼, SE ¼, Sec. 36, T28N, R32W

UTM Coordinates: x= 377963; y= 4107175

Latitude/Longitude: 37.102945/-94.37338

Receiving Stream: Ditches to Grove Creek

First Classified Stream and ID: Grove Creek (P) (3204)

USGS Basin and sub-basin ID: 11070207-0606

**Instream Monitoring and Compliance Locations.** All were removed from monitoring in 2003.

- **SM01:** Upstream Grove Creek monitoring point was located in Scotland Spring. NW ¼, Sec. 12, T27N, R32W.
- **SM02:** Upstream Center Creek monitoring point was located at Center Creek and Alternate 71 bridge NW ¼, Sec. 34, T28N, R31W.
- **SM03:** Highway HH and Center Creek monitoring point was located at HH bridge and Center Creek. NW ¼, Sec. 24, T28N, R32W.
- **SM04:** Instream Grove Creek Compliance Point #1 was located about 1,000 feet north of Outfall #002 at the end of an unpaved road. NE ¼, Sec. 36, T28N, R32W.
- **SM05:** Instream Compliance Point #2 was located at the low water crossing. SW ¼, Sec. 25, T28N, R32W.

**Appendix C: Best Management Practices used at Expert Management**

Number	BMP Title
<b>I. Good Housekeeping</b>	
<b>A. Material Storage and Handling</b>	
1-1	All drums, cans, tanks, valves and containers that are outside with potential for exposure to stormwater are labeled
1-2	Trash dumpsters with lids are placed at selected locations
1-3	Liquid wastes are not poured into drains
1-4	Outside waste and recycling materials are stored in proper containers
1-5	Hazardous materials inventory is limited
1-6	Non-Toxic or less toxic cleaning solvents are used as much as possible
1-7	Solvents are used efficiently
1-8	Containers are properly stored
1-9	Open flames are not allowed near flammable material
1-10	Proper handling procedures are employed to transport material/waste
1-11	Integrated pest management control is established
1-12	Pesticide operations are conducted by a contractor under the supervision of licensed applicators
1-13	The least amount of soil as possible is disturbed or removed during excavation or other land disturbance activities
1-14	As much vegetation as possible is left in place during excavation or other land disturbance activities
1-15	Any existing trees, shrubs and soils that will remain in their natural state, are protected from damage by heavy equipment
<b>B. Vehicle and Equipment Maintenance</b>	
1-16	Obsolete equipment, inoperable vehicles and surplus materials are disposed of properly
1-17	Incoming vehicles and equipment are checked for leaks
1-18	Company vehicles are checked for leaks
1-19	Vehicles are washed in a designated area
<b>C. Painting Operations</b>	
1-20	Painting operations are done by an experienced contractor
<b>II. Preventive Maintenance</b>	
1-21	Stormwater conveyance systems are regularly inspected
1-22	Equipment exposed to stormwater is regularly inspected
1-23	Vehicles are kept clean and in good condition
1-24	Equipment is kept in good condition
<b>III. Spill Prevention and Response</b>	
1-25	Spill Reporting and Response procedures are in place
<b>IV. Stormwater Management</b>	
1-26	Constructed wetlands are used at Outfall 018 to manage stormwater and groundwater seepages.
<b>V. Erosion and Sediment Prevention</b>	
1-27	Grassy filter strips or grassy swales may be used as structural controls
1-28	Exposed areas may be barricaded with straw bales &/or silt fence
1-29	Barren areas are revegetated
<b>VI. Runoff Control</b>	
1-30	Grade surfaces to redirect sheet flow
1-31	Use diversion dikes or berms to force sheet flow around a protected area
1-32	Construct stormwater conveyances (swales, channels, gutters, drains, sewers) to intercept, collect and redirect runoff
1-33	Construct a temporary diversion, excavation of a channel along with placement of the soil in a dike, on the down-gradient side of the channel
1-34	Cover temporary stockpiles and backfill materials to prevent erosion and sedimentation
1-35	Use silt fences to contain runoff from easily eroded slopes
<b>VII. Employee Training</b>	
1-36	Employees are trained in safety procedures
1-37	Employees are trained in spill response procedures
1-38	Employees are 40 hour HAZWOPER trained
<b>VIII. Scheduling</b>	
1-39	Coordinate the timing of land disturbing activities and installation of erosion and sediment control measures to minimize water quality impacts
1-40	To the maximum extent possible, schedule demolition and other land disturbance activities during the dry season.
1-41	Schedule demolition activities so that areas of land disturbance are being re-vegetated as new areas are being disturbed to maximize the proportion of re-vegetated land to disturbed land.